

The magazine for **AUSTRALIAN** Amateurs

August 2002  
Volume 70 No 8



# Amateur Radio

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**How to  
Grow a  
Radio Club**  
Blue Mountain RC speak  
from experience

**High scorer Brad VK2JBC**

holds his Dad's 1971 WIA certificate  
alongside his own 2001 RD Contest certificate

ISSN 0002-6859



**A Capacitance Bridge for Radio Work**  
by Drew Diamond, VK3XU

**Superconductivity - What is it?**



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# Amateur Radio

Volume 70  
Number 8  
August 2002

The Journal of the Wireless  
Institute of Australia  
ISSN 0002-6659

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Newsletters Unlimited 03 9756 7727

## Printer

Streamline Press, Melbourne (03) 9417 2796

## Postal Service

IMB (03) 9291 5888

## Production Deadlines

Advertising booking and articles for  
publication 10<sup>th</sup> of preceding month.

Hamads and advertising material deadline  
18<sup>th</sup> day of preceding month

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## Our cover this month

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### Contributions to Amateur Radio

Amateur Radio is a forum for WIA members' amateur radio experiments, experiences opinions and news. Manuscripts with drawings and/or photos are always welcome and will be considered for publication. Articles on disc or email are especially welcome. The WIA cannot be responsible for loss or damage to any material. A pamphlet, How to write for Amateur Radio is available from the Federal Office on receipt of a stamped self-addressed envelope.

### Back issues

Back issues are available directly from the WIA Federal Office (until stocks are exhausted), at \$4.00 each (including postage within Australia) to members.

### Photostat copies

When back issues are no longer available, photocopies of articles are available to members at \$2.50 each (plus an additional \$2 for each additional issue in which the article appears).

### Disclaimer

The opinions expressed in this publication do not necessarily reflect the official view of the WIA and the WIA cannot be held responsible for incorrect information published.

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## Editorial Comment

Colwyn Low VK5UE

### Time for activity

This month sees several contest activities, the Remembrance Day and ALARA Contests. If you are into contests please participate. If you have never tried well you have to start somewhere.

This year I might try and get a reasonable number of CW contacts but I will have to do a bit of brushing up. If I do not use my Key very often I revert further into translating dots and dashes in my head to letters and then writing them down. I have never really got to hearing and automatically recognising symbols unless I have listened to a lot of Morse just above a speed I am comfortable with. What then surprises me is that what I have written does actually make sense. I have always aspired to being able to read code in the background. Maybe when I give up editing AR at the end of the year I will be able to sit down and practice enough to achieve this aim, but then there is.....

Apologies to Ron Homes VK5VH who wrote the "Shack in a Briefcase" article we published last month. I got his call sign incorrect on the front page. Ron tells me (he is still speaking to me) that he has had a few queries and he will provide answers in September AR. If you have any queries please contact Ron.

### Photographs

Now to ask a favour from our contributors. This month there has been considerable trouble with photographs which were supplied only as imbedded objects in the text. We also have trouble with scanned pictures and figures, which have been compressed. It needs a very good compression/decompression algorithm to get near the original after processing. Where an

article has figures and photographs it is useful to have them imbedded in the text to show placement, however in these cases please supply the graphics separately.

If you are offering a photograph as a possible cover, the preferred orientation is portrait. Please scan electronically at 600dpi and save as a jpg. It should then be about a 1 Mb file. Similarly if you use a digital camera, a usable photo will produce a jpg of about a Mb. That is a high-resolution digital photograph. Neither Newsletters nor I have trouble with Megabyte or larger files. The body of the magazine is worked up at 300dpi.

### Club resurrection

This month we feature an article from the Blue Mountains ARC on how they turned the club around. I hope there are a few ideas in the article for your club. If your club has activities which are popular then please write to AR so we can all benefit from your experience. I would be interested also in your views on what in Amateur radio is most attractive to the under 20s.

### Activity suggestions

Plan for the Summer Field Days. Actually do something about a computer or with it. Can you help the local Radio Club with a project, or share some of your experience with them at a meeting? What can my club do to attract more members? There must be lots more so please do something to help your fellow Amateurs.

73 Colwyn.

## Cover Story

**Photo is Brad VK2JBC, who gained the highest score in the VK2 division HF phone single operator of the 2001 RD Contest.**

Brad says "that after a long period of inactivity my interest in amateur radio was rekindled when I became aware of Yaesu's portable HF to UHF transceiver the FT817. A few months prior to the 2001 Contest, I began going through some of my dad's (silent key -Cecil VK2CEC) old Amateur Radio

documents and I noticed that in 1971 he won this section of the RD Contest. In 1971 his call was VK2BEC. Seeing as 2001 was the 30 year anniversary, I decided to have a go".

The picture shows Brad holding his dad's 1971 WIA certificate as well as his own 2001 RD Contest certificate.



## AR Take 5 Survey

I have today closed off the survey having received some 242 responses to date. Thank you to everyone who responded. As promised when the survey was launched there was a draw conducted to determine the winners of a free subscription to AR for one year. I am pleased to announce that the names

selected were:

- Alan Simpson VK4AAE, and
- Chris Gates of Lake Tyers Beach in Victoria (Chris is not licensed yet but is working towards his examinations).

Also as promised here are the results of the survey:

Question	Percentage	Comment	Question	Percentage	Comment
State	2% VK1 20% VK2 27% VK3 19% VK4 12% VK5 7% VK6 5% VK7 0.5% VK8 7.5% Not specified	Indicative only of State based membership	Are you happy that members opinions can be heard within the WIA?	76%	Many members have observed that their communications to state and Federal officers have been ignored (*see below)
Are you currently a WIA Member?	78%	We need to find a way to communicate with non members since this indicates that we are missing a large number of possible amateurs.	How can we improve communications?		Around 50% of the responses made suggestions ranging from wider use of broadcasts through to increased use of email.
Have you held a WIA membership in the past?	28%	Many ex members have left because of high cost, or belief that they are not listened to.	Would you be interested in an electronic version of AR?	33%	This is a significant number of members who would like see AR delivered electronically. Many of these suggested that this could be done at a reduced subscription rate
Do you receive an AR subscription?	72%	Of the members who subscribe many comments were made that we need to ensure that we maintain a high standard of content.	Do you currently hold a licence?	88%	The 12% who don't hold a licence fall into those who have let their licence drop due to high costs, or are not yet licensed.
Have you held a past AR subscription?	23%	Many people have stopped their subscription because they feel that it is: <ul style="list-style-type: none"><li>• Late</li><li>• Not of high enough quality</li><li>• Lacks technical material</li></ul>	Do you have access to the Internet?	69%	This is a high proportion when compared with other groups and indicates that we should be using the Internet more to communicate with amateurs.
Would like to subscribe to AR on the newstands?	46%	There seems to a lot of support for the choice introduced by having AR on the newstands.	Are you a member of a club	50%	Only around 50% of respondents are club members, or get involved in club activities. We therefore need to find ways to talk directly to these members.
Are you happy with the way that the WIA keeps members informed?	88%	Although many members are happy with current flow of information there were many comments about making it more timely and more frequent.	Sex	99% Male 1% Female	We fail the equal opportunity criteria and definitely need to recruit more women to the hobby.

continued on page 16

# A Capacitance Bridge for Radio Work

Drew Diamond, VK3XU

45 Gatters Road, Wonga Park, 3115.

For the measurement of passive radio components, a good inductance-capacitance-resistance (LCR) bridge is still probably the most ideal tool. But they are usually expensive, even second-hand, and do tend to be rather in the 'boat-anchor' category.

Generally, the lowest capacitance range of a low-cost contemporary 3.5-digit DMM has a full-scale reading of perhaps 2 nF (2000 pF), and for routine capacitor measurements, such direct-reading meters are certainly very handy for ordinary electronics work. However, the serious experimenter soon finds that the resolution, when measuring small values, common in radio, is rather poor. So, if it is needed to measure a small variable capacitor for a VFO for instance, whose range may be (typically) 5 to perhaps 15 pF, there is usually insufficient resolution to permit a

satisfactory measurement. Furthermore, such meters do not usually take account of any leakage resistance present in the capacitor under test, as they work on the effect of the total series impedance. Erroneous readings may therefore be obtained where the capacitor has significant internal resistance.

A better method is to use one of the true bridge configurations, such as the classic Wheatstone pattern (Refs 1 and 3). Our ears make an excellent detector in precision measurements. If there is some fault with the capacitor (not uncommon in older silvered micas and

some ceramics), such as low equivalent parallel resistance (high leakage), or excessive equivalent series resistance; the bridge will not balance well, indicated by a "shallow" or vague null. A good, high Q (low D) capacitor will always give a satisfyingly deep null when measured in a true bridge. When building a high-stability oscillator for example, it would be sensible to check every capacitor for correct value, good stability and high Q before installation, thus avoiding the possibility of having to later troubleshoot a wobbly, jumpy (or won't fire-up) oscillator.

Offered here are details of a simple Wheatstone capacitance bridge, made from easily obtained parts. Measuring range is from 1 pF to 10  $\mu$ F in six overlapping ranges. For instance, on the 10 pF range, 10 pF lies at mid-range of the calibrated 'multiply by' dial, so that capacitors from 1 pF to 100 pF may be measured. On the next range, 100 pF is at mid-dial, which provides a measuring range of 10 to 1000 pF (1 nF), and so on, up to 10  $\mu$ F. The prototype is a capacitance-only bridge for two reasons; resistance is generally measurable with an ordinary multimeter, and need not be repeated for this instrument. Inductance capability would rather complicate the job, and the extra wiring needed would spoil the minimum measurable capacitance. In any event, for best accuracy, radio inductors are usually best measured at or near their intended operating frequency.

## Circuit

Our ears are quite sensitive at about 1 kHz, which is probably why bridge manufacturers chose this frequency very early. In this iteration, an approximately 1 kHz tone is generated by a common NE-555 timer chip (see Fig. 1), wired as an astable oscillator. Wave shape does not particularly matter here. The oscillator signal is applied to the primary of a 3 k : 3 k interstage transformer. The secondary winding (centre tap not used) drives a conventional Wheatstone bridge. Any one of a set of six capacitor 'standards' is selectable with switch S1.

Each side of the 1 k 'multiply by' pot, whose slider is connected to foil- or "ground" ("ground" here is circuit board foil common, not necessarily earth ground) effectively forms the ratio-arms for the left-hand side of the bridge. 100 W resistors at each end of the 1 k pot prevents crowding at the ends of the

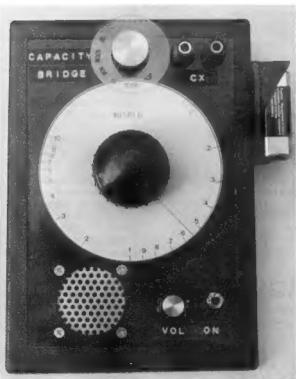


Photo 1. Capacitance Bridge

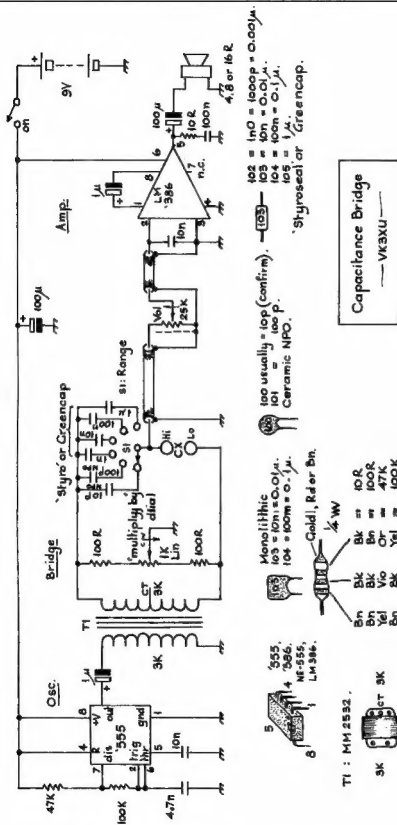


Figure 1

'multiply by' dial. The 1 k ratio pot thus provides a 100:1 measuring range for each setting of S1, which greatly improves the utility of the instrument, as noted above. When the 100 pF capacitor is in circuit for example, and a good 100 pF capacitor is connected to the "CX" terminals, the bridge will be "in balance" when the slider of the 1 k pot is at about mid-travel. That is, the tone potential between the "Hi" terminal and ground is zero.

The "Hi" terminal is connected to the top of the 25 k (Volume) pot, whose slider is presented to the input of a popular LM-386 amplifier chip and 'speaker, wired for maximum gain.

## Construction

To keep 'stray' capacitance to a minimum (and thus insure an ability to measure small values), a sloping panel style plastic case, measuring 134 W x 189 D x 32 (55) H mm was chosen to house the prototype. Any plastic case style that you prefer should serve. The 9 V 'transistor' battery and holder may be fitted inside or outside the case, as desired.

A suggested 'paddyboard' (Ref. 2) style circuit board layout is shown in Fig. 2 and Photo 2. Layout is not particularly critical, but wiring and component lead lengths should be kept reasonably short, particularly those associated with the bridge circuit. The '555 and '386 chips may be fitted into 8-pin I.C. sockets, which have fine (about 0.6 mm) tinned wires attached, and are soldered upon suitably sized (about 30 x 25 mm) segmented substrate boards (or you could use 'experimenter' boards, available from DSE and Jaycar), which in turn are super-glued, copper side up upon the main circuit board.

Use shielded wire where shown in order to prevent mains hum pick-up (which would mask the null). The case of the 25 k (Volume) pot should be connected to the shielded wire braid as shown on the circuit.

For good resolution on the 'multiply by' dial, it should be as large as can reasonably be accommodated. That shown is a 90 mm diameter aluminium disk, with two coats of white auto spray undercoat paint. The 1 k pot is located at about the middle of the circuit board and case, where the threaded bush is

used to secure these parts. The dial cursor is a same diameter disk of 3 mm thick Perspex which may be machined to size in a "poor-man's lathe" (disk is rod-sawed to approximate size-1/4" hole drilled dead centre-1/4" Wh bolt, nut and washers- fitted into chuck of electric drill in bench vice-smooth file applied to rotating edge). Scribe a cursor line from the centre to the circumference, and fill with black crayon. The disk is then glued to the back of a suitably sized knob.

## Calibration and Operation

Verify that all components are wired properly, and that polarized components are correctly oriented- pay particular attention to the LM-386 and NE 555. Set both pots to about mid-travel, and then switch on. You should hear a 1 kHz tone. Connect (say) a known good 100 pF capacitor to the CX terminals. With S1 in the 100 pF position, carefully adjust the 'multiply by' knob for a deep null in the tone, which should occur at about mid-travel. Use just sufficient volume for comfortable listening. Connect various values of capacitance to check the operation of all other ranges, and observe that a good null is achieved on each range.

Obtain a collection of 'calibration' capacitors (preferably 'styryoseal' or 'dipped silver mica' types for stability, low D and low leakage). A set of ten 100 pF caps is suggested. On the 1 nF range; starting with a single 100 pF, progressively null and mark (on your dial- with a pencil) each capacitance from 100 pF to 1000 pF (1 nF) by paralleling units for 200 pF, 300 pF... and so on. These points should be labelled 0.1, 0.2, 0.3 and so on up to 1. The same caps may be used to calibrate the 100 pF to 1000 pF (1nF) marks with S1 in the 100 pF position, which are marked 2 (200 pF), 3(300 pF) 4, and so on. Note that '1' should lie at about mid-range, and the scale of the 'multiply by' dial holds for every range. If desired, use rub-on letters or similar (from stationer's) and apply appropriate calibrations to your dial.

After calibration, you should have a good 'feel' for the instrument. In the 10 pF position, and with no capacitor connected to CX, it should be possible to obtain a fair null right down below the 0.1 position on the 'multiply by' dial- which is just the capacitance of your terminals- something less than 1 pF. Connect a 1 pF capacitor, and check that a good null can be had just a little above the 0.1 mark, thus proving that the lowest range is working correctly. Use just sufficient 'volume' to detect the null- otherwise the null may be masked.

## Parts

The components specified are available from our usual electronics suppliers, such as Altronics, Dick Smith

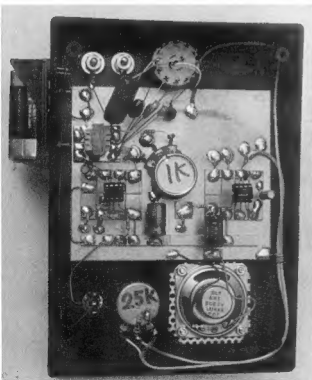


Photo 2. Internal View



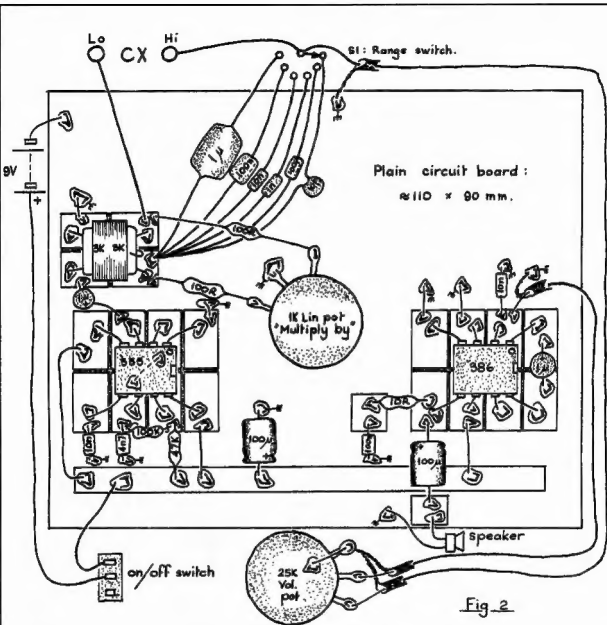


Figure 2

Electronics and Jaycar. The case used for the prototype is a Jaycar HB-6069, and the 3 k to 3 k transformer is a Jaycar MM-2532, and the other suppliers have similar items. A suitable interstage transformer of about 3 k: 3 k and a small 'speaker' of 4, 8 or 16 ohms may be salvaged from a defunct transistor radio.

## References and Further Reading

1. Radio Handbook; William Orr, (any edition), Sams Publications.
2. "Paddyboard Construction"; Diamond, AR, Feb. '95.
3. Test Equipment for the Radio Amateur; Clive Smith, G4FZH, RSGB.

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# Superconductivity: what is it?

Paul Clutter VK2SPC

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**Superconductivity is a phenomenon occurring in many electrical conductors in which the electrons responsible for conduction undergo a collective transition into an ordered state with many unique and remarkable properties. These include the vanishing of resistance, the appearance of unusual magnetic effects, and substantial alteration of many thermal properties.**

Superconductivity was discovered in 1911 by H K Onnes in Leiden, Netherlands while studying the temperature dependence of the critical resistance of mercury within a few degrees of absolute zero. He observed that the resistance dropped sharply to an unmeasurable value at a temperature of -452 degrees Fahrenheit, or 4.2 degrees Kelvin (see Fig 1). This is called the transition or critical temperature.

Between 1911 and 1988 several thousand superconductive alloys and compounds were found including about 50 metallic elements. From 1986 superconductive alloys were found that had higher critical temperatures which only require liquid nitrogen to cool them. Liquid nitrogen is 500 times less expensive than liquid helium for cooling. A compound of mercury, thallium, barium, calcium, copper, and oxygen has a superconductivity temperature of -208 degrees Fahrenheit and only requires liquid nitrogen (-321 degrees F) to cool it.

In 1933 W Meissner and R Ochsenfeld discovered that a metal cooled to superconductivity in a moderate magnetic field expels the field from its interior. This discovery demonstrated that superconductivity involves more than simply very high or infinite electrical conductivity. Today, many research labs around the world are trying to bring the transition temperature of superconductivity up to room temperature which, if achieved, will revolutionise just about everything which requires power to operate.

Huge inefficient power cables would give way to very thin wires carrying all the energy we need, saving power companies and customers billions of dollars a year and also helping to slash greenhouse emissions. That whopping

big power transformer in your power supply would shrink to a quarter its size, with double the power.

In Detroit, Michigan, for example, some 30,000 homes are getting power down superconductive cables cooled by liquid nitrogen. US Naval engineers are building superconductive motors where wires can carry vast currents without heating, resulting in massive magnetic fields, which make extremely compact and powerful motors.

A team in Zagreb, Croatia claim to have developed a new

**Today, many research labs around the world are trying to bring the transition temperature of superconductivity up to room temperature which, if achieved, will revolutionise just about everything which requires power to operate.**

superconductivity material, a mixture of lead carbonate, lead, and silver oxides which will superconduct up to 30 degrees Celsius. However, they have not been able to supply other labs with samples, raising some doubts; where other labs have the formula they have not been able to produce the results. The Zagreb team say they should have samples very soon. On the down side, as with many new inventions and discoveries, the cost is staggeringly expensive.

An example of this, historically, was the cost of a radiotelephone transatlantic call from the USA to Europe which, in about 1920, cost \$75 for three minutes

plus plenty of QRM! Compare that with similar costs today.

What does superconductivity have to do with perpetual motion? The total reduction of resistance in a device may increase the possibility of perpetual motion. If a superconductive metal is made into a toroid and a current is induced into it, the current will flow around it indefinitely. Adding windings would give everlasting power. Induced currents have been observed to persist in superconductive loops for several years. Very precise measurements of the magnetic field produced by a persistent current using nuclear magnetic resonance over short periods of time have established that the super current decay time is at least 100,000 years. This implies that the resistance in the superconductive state is at least 1012 times less than in the normal state.

However, the scientific definition of perpetual motion is such that any device must not use any energy in its function and is able to last indefinitely. Scores of ideas which depend on natural forces such as air pressure, temperature, and tides have been submitted to patent offices.

For instance, there are "atmos" clocks, which operate by atmospheric pressure and temperature. A slack membrane diaphragm can detect down to a pressure of 0.00036 pounds per square inch, operating a barometric unit to wind the mainspring. The temperature changes expanding ethyl chloride sealed in a drum operating as an aneroid can run a clock for 48 hours with a variation of only two degrees Fahrenheit. With greater pressure and temperature changes these clocks will be fully wound and run for more than 100 days,

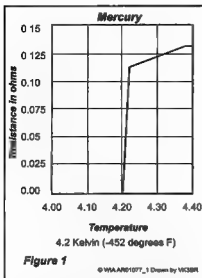


Fig 1 - A graph showing the superconductive transition temperature of Mercury at 4.2 degrees Kelvin (452 degrees Fahrenheit).

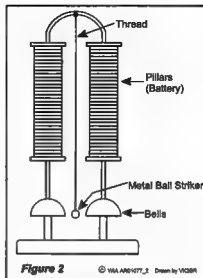


Fig 2 - Bell device which has been operating since 1840 (see text).

depending on their mechanical design. The rotating pendulum is used instead of the swinging pendulum in many clocks because the unwinding power of the mainspring is slower and lasts longer. However, these devices, which depend on natural forces, are not acceptable because the scientists claim that one day there will be no more forces due to the expanding sun, which will wipe them out.

Finally, a bit of interesting trivia. Fig 2 shows a bell device, which has been operating since 1840, the year in which

it was assembled. Reverend Robert Walker spotted it in a London instrument maker's shop. He purchased the bell and took it to Oxford University where he was a Reader in Experimental Philosophy, and it has been there in the university's Clarendon Laboratory ever since. There is no visible mechanical source of energy to account for the continuous movement of the metal ball striker suspended by a thread between the pillars. Each pillar consists of some 2000 pairs of zinc foil and paper discs impregnated with manganese dioxide.

Together, they produce about 2000 volts at an extremely low current. The long lasting batteries are connected to the bells, which give them opposite charges. The ball striker gets a positive charge from the positive bell then becomes attracted to the negative bell which charges it negatively and of course it goes back to the positive bell again. Due to the very low current, the bells will continue to chime until the batteries run out, possibly well into the 21st century

at

## WRC 2003 – Donations

The following are some of the donations that have been received so far.

On behalf of the Directors and Federal Council I would like to thank you all very much for your generosity.

Your donations are important to us to ensure that the interests of amateur radio are properly represented at WRC 2003

Ernest Hocking VK1LK - Federal President

VK1DE	VK3NJR	VK2EVK	VX6GN	VK3AAW	VK6LC
VK1LN	VK3OW	VK2EXW	VX6HK	VK3ABT	VK6VK
VK1ZXW	VK3OWF	VK2II	VK5LP	VK3ADM	VK6YR
VK2AGG	VK3UG	VK2KUZ	VX6NWH	VK3AJL	VK7CCC
VK2AJE	VK3UV	VK2NBZ	VK5NX	VK3ANP	VK7KBB
VK2AJN	VK3ZAJ	VK2SW	VK5VH	VK3APC	VK7KH
VK2AY	VK3ZCZ	VK2TM	VK6AGE	VK3AQU	VK7RM
VK2BHT	VK4AES	VK2TQ	VK6IU	VK3AYQ	VK7RN
VK2BOD	VK4BHC	VK2YWH	VK6JQ	VK3BCZ	VK7TB
VK2BU	VK4JS	VK2ZIL	VK6JX	VK3BZA	
VK2BVU	VK5AO	VK2ZIP	VK6KC	VK3DKT	
VK2DB	VK5APC	VK2ZOI	VK6KG	VK3HY	
VK2DLY	VK5BS	VK2ZSA	VK6KW	VX3INDS	
VK2EOP	VK5BK	VK2ZSP	VK6KXH		

# How to reverse the direction of a downward spiralling club



## The resurrection of the BMARC

Many clubs are experiencing a downward turn in membership and general interest in amateur radio.

This article is presented as an example of how we can turn our hobby around. There are many more ways to do this apart from what is written here, this is just our story.

By Phil. Derbyshire, VK2FIL

President, Blue Mountains Amateur Radio Club Inc

About six years ago the *Blue Mountains Amateur Radio Club* was sliding down hill. The membership was falling and although the bank balance was in the black, just, only about 15 members (or less) turned up at meetings. We were doing no projects, and the club's two-metre repeater was off line more often than not. When it was on line it did not have a very large service area, and was generally noisy and had interference. The size of the club may sound reasonable, but as the club was going nowhere and doing nothing, there was a danger of further deterioration with a motion on the books to wind up the club.

Sound familiar? I think at least some of it would apply to many clubs today, especially with the added costs now imposed in the way of land rates, rents, insurance increases etc. I think there are a lot of clubs, especially in country areas, looking for a way to turn things around.

- Increase the size of the membership, and keep the members renewing their membership.

- Involve the members in the club projects.
- Find a new location to hold meetings.
- Build a club station.
- Revitalise the 2m repeater.
- Make the club more accessible to others.

The first thing was to find a way to inject additional funds in to the coffers. At the time the FM900 radios came onto the market. We bought a pallet load of them. This was followed but a few

### What changed?

A new committee which was committed (excuse the pun) to putting the fun and excitement back into HAM radio, and one other further ingredient, MONEY. We were in a position where we had to do something, but did not have the funds to do anything. What was developed was a plan to incorporate all of the above with the aim of having a sustained revival. The committee decided to run the club like a company. This meant we had to make some cold commercial decisions and be adaptable.

Items put on the agenda:

- Increase the bank account balance
- Get the members interested in the club and keep the interest.



The motley crew for the 2001 John Moyle Field Day at Hill End, John VK2QN, Danny VK2DC, Guy VK2KU, Phil VK2FIL and Stephen VKAVV. This crew came 3rd overall in the contest (a rougher bunch you would not want to see!)



The Rex Black Memorial Trophy is on the left, the trophy on the right is the one given to the recipient.

"workshop" weekends where many members turned up and worked on ALL the radios to convert them to the 2m band. These were then sold off to the members at a fairly cheap price and a dearer price to non-members. The membership rose a little.

Next project was to revitalise the two repeaters. Adrian, VK2BFN, organised for the rebuilding of the 2 repeater, and the 70cm repeater relocated to be with the 2m repeater at Lawson in the Blue Mountains. The third repeater (for 70cm) was given to the Nepean Amateur Radio Group. The height of the aerials were increased so that the tip was some 80 feet (24.39 m for the metrically minded) above the ground. Given that Lawson is 700 m above sea level, this gave the two repeaters massive footprints. Both repeaters can now be accessed from Shellharbour in the South and as far as Gosford in the North, all this while being mobile. The 2 m repeater has also been worked from as far as Kiama and Mittagong.

These two projects stimulated the members very substantially, and increased the size of the bank balance at the same time. The 2 m repeater was seen to be the "flag ship" of the club. We then put a telephone line into it so that it could be controlled remotely by the repeater manager. This meant that, as the repeater is software controlled, it would be more reliable as the manager

could do work on the repeater from home. (The repeater needs only a 486 PC). The telephone line is also put onto divert to one of the committee members. This is so that the number can be advertised for prospective new members. When they telephone, the prospective member can make direct contact with a committee person. We then made it a policy to put an "ident" on to each of the repeaters, using the voice of one of the members' wives, preferably the one related to the member who did the work on that particular repeater. This was seen as away of involving the family in the hobby.

We also set up a comprehensive web page, set up and maintained by Steve, VK2BGL. This, amongst other things allows prospective members to download a membership application form. This has been extremely successful. The web page also has the current edition of our monthly magazine "Ragchew". The rest of the web page is taken up with many useful links and the latest news about the club.

Next it was time to find a better location for the clubrooms. This was because we had out-grown the existing location. We first approached the local council with our request. They came up with some suggestions, but we found them to be in a great need of repair, in the wrong location or the rent was too high for us to pay. Then we heard about St Columba's college at North Springwood. They were running electronics classes for the high school students and they were also putting together a 14 m diameter dish to be used as a radio telescope. They also needed some help to finish the project. We had a member who was a teacher at the college, so we applied for the use of one of their rooms as a meeting room.

This all comes at a price; there is no such thing as a rent-free premise. In return we help with radio telescope, and provide help with the electronic classes in any way we can. One of the ideas in moving into a school like this is to foster a "mentor" type situation with the students. The type of help we have given to the

school has been via donations of computers, software and steel cupboards for the storage of electronic equipment.

For some time there had been talk within the club about linking our 2 m repeater via the Internet. Steve VK2BGL started to experiment with various programs and got the 2 m repeater on the Internet and linked with Nottingham in England, an experiment so successful that a number of links were made with places like Italy, Germany, Iceland, and USA to name a few. This was the beginning of us all hearing the foreign call signs on our local repeaters.

## IRLP first

We had for some time been trying to link up with a "sister" club overseas. We found the Blue Mountain Amateur Radio Club in Collingwood, Ontario, Canada. On making contact with the club's President, Doug Measures, VE3TVD, he told us about the IRLP system that was being set up in Canada and the USA. At that time I think there were only about 20 nodes in the world, and these only in Canada and the USA. We were put in touch with Dave Cameron (in Vancouver) who developed the IRLP system. Peter VK2YX picked up the ball and made all the necessary contact with Dave and bought in a board and software. From this he put together the first IRLP node on the East Coast of Australia (the first node in Australia was in Fremantle in VK6). This node was connected to the 2 m repeater (VK2RBM). This created a lot of interest



14m Dish radio telescope at St Columba's

in the repeater and it soon became probably the most used repeater in Sydney. Peter then embarked on a series of lectures to various clubs through out the state on the virtues of the IRLP system. The rest is history

## Q News

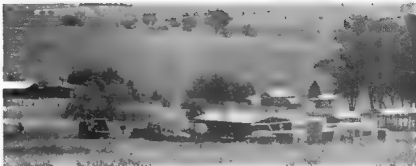
The next experiment Peter embarked on was the relaying of "Q News" over the 2 m repeater. This was met with fair success, but did stimulate a lot of interest outside the club. This is still in the experimental stage as we have problems with the electricity supply at our Lawson site. But these problems will be solved soon and the "Q News" will return to air. At this time I would like to make a point to all. It has been said that this relay of "Q News" is set up as being competition with the WIA broadcasts. **THIS IS CERTAINLY NOT THE CASE.** This is set up as a service to the amateur population in general and to try and stimulate interest in HAM radio.

## Trophies

It was decided that an incentive type award was needed. An annual trophy was introduced. This is the "Rex Black Memorial Trophy". There are two parts to the trophy, the perpetual trophy, and a smaller trophy, which is presented to the winner. The trophy is given to a member who has shown exceptional service to the club, amateur radio or for self-improvement. The trophy takes the form of a transmitter valve (like an 813) set on a trophy base. The perpetual trophy is a vacuum capacitor (from a large commercial transmitter) on a trophy base. On this all the winners names and call signs are engraved with the year in which these people won the trophy.

## Ways to raise money for projects

Two ways we raised a lot of funds were by having regular impromptu auctions. These were not advertised and were generally organised via one of the committee members. These were not advertised on purpose. This way members did not know when the auctions were and had to come along to find out. (There! The secret is out, fellow members!!!) The other thing we did with the auctions was to make sure that anything which was sold was of quality.



2002 John Moyle Contest. The HF station as seen from the VHF station

No junk! The club also set up a shop. This is run every meeting and again only quality and cheap prices. We gave the shop manager, Adrian VK2BFN, a float and he buys up in bulk from whatever source he sees fit. These two activities are a continuing source of funds. On some nights we make as much as \$200 from either. We have also run several raffles, the prizes being open money orders at Dick Smiths, and sometimes bottles of port. John VK2IUI has donated two Realistic 10 m radios over the past 12 months. These were raffled over extended periods (like 6 to 9 months) and were great fundraisers. One other way we were able to raise funds was through donations to the club.

This was in the way of members and "friends of the club" donating amateur radio or related equipment, the total funds from these going to the club.

Foxhunts were another activity in which the club engaged. These were generally held on a Friday night and ended with a port and biscuits supplied by the fox. On other occasions these were held on the weekend and concluded with a BBQ. The fox for these



2002 John Moyle Contest. Inside the HF station Andy, VK2TVI at the controls



2002 John Moyle Contest - the VHF station. The two stations were within 400 m of each other, this ensured no cross band interference.

activities was generally Danny VK2DC or Steve VK2AVW

The next project is getting something happening on 6 m FM. Currently we are building a 6 m repeater. This project should be on air early in the very near future and currently is fairly well advanced. The follow up project is a 10 m repeater

To show you some of the projects that have come from items sold at these



2002 John Moyle Contest. Pascal, VK2IHL at the controls of another part of the HF station



2000 John Moyle Contest. Dave, VK2JDC waking up on Sunday morning.

auctions, Pascal VK2IHL is an excellent example. He has now developed a number of PIC based projects, and some pre amplifiers for 1296 MHz and 70cm. Again as I have pointed out you need to stimulate the members.

Each December we have the Christmas party and this is the time we have the giving of prizes. These include the "home brew" competition and "Rex Black Memorial" trophy. At the AGM we have prizes for "operator with the most successful net".

Our magazine, "Ragchew" is another area we improved. For years it was only one double-sided page. Kevin VK2KEV took over the editing of the magazine and completely revamped it. Now it contains photos and is usually around 10 pages and on some occasions has reached some 20 odd pages. There are even some paid adverts with its pages. If you wish to see a copy of the magazine, go to our web site and down load it.

## Membership increasing

Now we get between 25 and 40 turning up at meetings. The membership has just reached around 100 in number. The members are from as far away as Davidson, Newtown, Concord, the Sutherland area and Liverpool. I might add that the members in these areas do turn up at North Springwood for the meetings on a Friday night. The members are also delegated tasks; all the hard work is not left just to the committee.

Another area that was well covered was the area of education. This was carried out by Terry VK2UX, and assisted by Dave VK2IH and Adrian VK2BFN. Terry did the lower Mountains while Adrian did the mid and upper Mountains. With members referring any and all non licensed enquirers, they were faced with carrying out classes spread out over several days during the week.

Two of our members, at different times, have organised 2 m FM contests. Initially these were organised by Guy VK2KU. Their primary object was to stimulate interest in VHF generally. The contests ran for a few years and had a consistent number of entries each year. The contest was organised for the VHF DX Group, but with the backing of the Blue Mountains Amateur Radio Club. In 2001 another similar contest was organised by Roger, VK2TEA. This time the accent was on "Get up and have some fun". And again the contest was well received.

Other activities we have been involved with and are continuing with is a series of Amateur Radio demonstrations. These were organised by Dave, VK2JDC, and take place at various week end markets with the local area. We are also looking at having demonstrations at various local shows. This will mean we have to hire an area and set up a demonstration over two days.

We are regular participants in the "John Moyle Field Day" contest. We usually make it a camp-out affair and have even used it as a demonstration to the public. In this case we advertised our presence in the local newspaper.

Other fundraising has been through a car boot sale held in conjunction with the Nepean Amateur Radio Group. This was fairly successful and we are looking at this with the view of holding a "Hamfest" in the West of Sydney. On a club level we have organised club badges, club T-shirts, and is now looking

at club caps and mugs.

After each meeting there was a talk which took the form of a lecture on an amateur related topic, or other subjects as diverse as astronomy with viewing nights. Also during the evening we hold a raffle or two. The prizes vary from port to open orders at Dick Smiths or similar as mentioned earlier.

## Contact information for BMARC

**Postal address:** PO Box 54  
Springwood NSW 2777.

**Club callsign:** VK2HZ 10m

**Repeater:** 29.680 MHz - (Under construction, on some time in 2002)

**6m Repeater:** 53.875 MHz

**2m Repeater:** 147.050 MHz +

**70cm:** 438.375 MHz

**Web page:** <http://www.qsl.net/bmarc>

**Telephone Number:** 02 4759.3950

**2m net:** Wednesday night at 2000 hrs  
on 2m repeater 80m net:

Tuesday night at 2000 hrs on  
3.543 +/- QRM

**Meeting Location:** St Columba's  
College Hawkesbury Road North  
Springwood

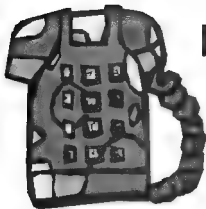
**Meeting Time:** 2000 hrs, first Friday of  
the month.

## Well there you have it

I guess what I am really saying is that you need a hard working committee (and club members), open minds, lateral thinking, and little bit of money does make it easier. All of the above ideas may seem like simple and small things. Individually they probably are, but collectively they work.

The other trick is to keep up the momentum. That is where the real gain is. The one last thing I can not stress enough is that all this is not the work or the ideas of just one person. It is a collective effort, and that is what makes the difference. The committee cannot do all the work. Members have to take on the responsibility of making the club work for them. After all, the club represents the members as a collective body. The other important thing is make sure you keep the members' interest. If you do this they will keep coming to meetings and other events organised by the club.





# DTMF encoder from an old telephone

Don Grimbale, VK6KAR

## Parts needed:

- A suitable plastic zippy box,
- old push button telephone (series 800 type is good),
- A 100 ohm 1/4w resistor,
- 1 TIP29C or TIP31 OR similar NPN transistor OR BD679 NPN Darlington pair transistor with a 4k7 ohms 1/4w resistor, or other audio amplifier,
- an 8 ohm speaker, suitable switch,
- 9 volt battery snap connector, (AA battery holder and power socket are optional items).

Generally in almost every push button telephone there is a DTMF encoder chip capable of producing the DTMF tones for the IRLP repeater system.

I had an old push button telephone amongst my junk box called a series 800 telephone that was only capable of pulse dialling. The dial on this old Telstra telephone has a push button assembly that is easily removable.

The chip on it was found to be a Mostek MK5089 and this chip is capable of both pulse dialling and DTMF (not used) dialling functions.

The assembly contains a large zener diode that knocks the DC level from about 50 volt down to 5 volt for this chip. I wired a 100 ohm resistor to the cathode end of the zener diode and fed +9 volt into the zener via the resistor (The anode was connected to 0 volt. An audio amplifier was used to determine the output pin on the chip (PIN 16).

Then pin16 was connected directly to the base of a TIP29C NPN transistor, the collector was connected to +9 volt and an 8 ohm speaker was connected between the TIP29C emitter and ground (0 volt). A TIP31 NPN or other similar transistor will also work well. A BD139 should work equally well.

The circuit works well with voltages from 9 to 13.8 volt and I put in all together with transistor and speaker in a plastic zippy box.

I have opened other push button telephones and have found that they all had zener diodes in them (some had two zener diodes) after 2 bridge rectifiers (bridge is used to convert the AC ring voltage to dc).

The zener diode or diodes will be in close proximity to the bridge rectifiers. The cathode end on the zener diode is often indicated by a black coloured band around its body or "thinner" on cathode end (see diagram).

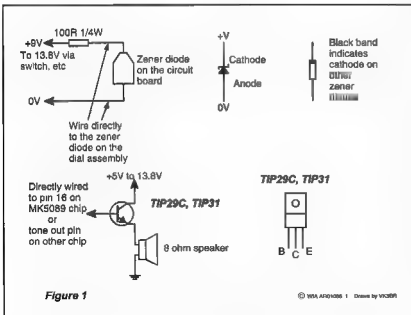


Figure 1

© WEA AFHQ008 1 Drawn by VK6KAR

The wiring to the on board zener diode and the output circuit

I could use all of these other push button telephones to produce DTMF tones by similarly wiring a series resistor to the zener diode and use an audio amp to find the output pin. The output can then be fed in to a single transistor or a Darlington pair transistor stage such as a BD679 or similar via a 4k7 ohm resistor on the base lead.

You could also use a separate audio amplifier if you wanted to be over careful not to blow up the DTMF chip (The chips will easy handle loads down to 500 ohm minimum at 5 volt so don't connect the speaker direct to the chip).

Many of these DTMF chips will work on a large voltage range (3 to 10 volt), 5 volt seems to be a happy level in the middle, to assume all these chips will work on. So wire in a series resistor on the relevant zener (diode or diodes) and away you go.

Data on various DTMF chips (obtained from the semiconductor manufacturer internet sites):

Philips PCD3310 20pin DIL chip  
TONE OUT=pin 3  
VDD (+5 volt)=pin19  
VSS (0 volt)=pin 4

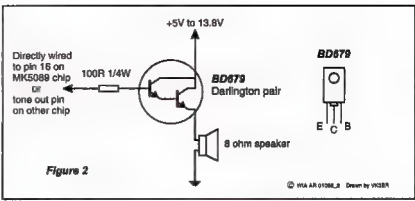


Figure 2

Alternative audio output circuit

Motorola MC145416. 20pin DIL chip  
TONE OUT=pin19  
VDD (+5 volt)=pin 2  
VSS (0 volt)=pin 7  
Motorola MC145412, MC145413, 145512. 18pin DIL chips  
TONE OUT=pin18  
VDD (+5 volt)=pin1  
VSS (0 volt)=pin6

Mostek MK5087, MK5089. 16pin DIL chips  
TONE OUT=pin18  
VDD(+5 volt)=pin1  
VSS(0 volt)=pin6

## WIA Comment

continued from page 3

I would like to offer any amateur the opportunity to talk to me directly on any matter of concern either via my mail box or email.

In conclusion the survey indicates a number of areas which we need to improve. I will be talking to the council and the executive over the next few months to see what we can do to address your comments.

### Other Business

Apart from dealing with the survey, and writing to many of you who so kindly included personal comments this has been a very quiet month on the Federal scene. I can though report that the ACA have made a start on the evaluation of a new set of examination papers.

### Operating and Experimentation

This month I found myself at home for a few days having injured my back and had the opportunity to do some amateur radio. Stuck in a chair for most of the

day and unable to move I was curious to see what I could do. Obviously homebrew was out of the question, but what about operating. Not so easy since getting to the shack was too difficult. Fortunately I own a transceiver with a remote control facility and the computers in the house are all networked together. So with a little ingenuity I was able to remotely control the transceiver. How though was I to key the transmitter? I tried using the SpeakFreely software package and instead of a microphone connected a morse keyer to the microphone socket on the PC next to my chair and lo and behold I was on air (at least on 2m with the signal monitored on a hand held). I cannot report any cw contacts from the lounge yet but now that I know that it can be done I look forward to being able to try a live QSO. All in all it reminded me of the fun to be had in the hobby.

I will bring this issue to a close and wish you all 73s. I look forward to hearing your views on any amateur radio

related matters and hopefully circumstances will permit me to meet with many more of you over the next 12 months.

Ernest Hooking VK1LK  
email: [president@wia.org.au](mailto:president@wia.org.au) or via PO  
Box 691, Dickson, ACT 2602

## Silent Keys

The WIA regrets to announce the recent passing of:-

- D (David) Parry VK2CX
- A D (Alan) Cook VK3AUC
- J C (Jack) Mathews VK3SY
- R Crawford VK3URC
- W S Strong ZL3TX

# More interesting Pre-War QSLs

Hon. Curator: Ken Matchett VK3TL  
4 Sunrise Hill Road, Montrose Vic 3765  
Tel: (03) 9728 5350

## W8CBF: prayers for kidnapped baby

This is a pre-war QSL dated 5 March 1932 and was sent to VK3HL, the late Allan Hutchings, known throughout the world of amateur radio as one of its greatest DX-ers. Allan obtained his experimental licence (as it was then known) in 1922 when 'spark' ruled. He became a 'SK' in 1973. The QSL was sent from Columbus, Ohio by James A. Porter.

At the time of the QSO the prefix W was allocated to Stateside licensees, K being allocated only to external territories such as Alaska and Hawaii. The W8 prefix was allocated to Ohio, New York, (all counties not included in the W2 allocation), Pennsylvania, (all counties not included in W3) as well as West Virginia and part of Michigan. After World War Two prefix allocation became much simpler, whole States being allocated a particular prefix. (The situation has, during the last few years, changed again since it is no longer possible to associate any callsign with a particular State of the USA.)

In his report Mr Porter uses the old form of signal report QSA5. R6 (Strength readability) and QRI-PDC (Tone: Pure D.C.). The 210 valve used here as an oscillator and frequency doubler was one of the most popular valves of the late 1920s and early 1930s. It was a low power triode with one of the new ceramic bases and had a peak power output of 15 watts.

One of the most interesting features of this particular QSL is the remark 'I sent your expressions of Hope of Baby to Lindbergh'. Apparently this QSL was in response to Allan Hutchings' comments on the tragic Lindbergh

kidnapping and his hope that the child would be returned safely to its parents. Charles Lindbergh was, at the time of this QSO, an aviation hero who, in his Ryan monoplane, 'The Spirit of St. Louis', had successfully made the first non-stop flight from New York to Europe (20 May 1927). Soon after, he married Anne Morrow, the daughter of the US Ambassador to Mexico. Prayers for the kidnapped child were offered throughout the world but remained unanswered. His infant son was found dead, the kidnapper being subsequently convicted and executed.

425 FREDIS AVENUE		★ ★ ★		COLUMBUS OHIO	
RADIO <u>VK3HL</u>		Acknowledging QSO <u>MRH 5</u> , 1932, at <u>6:15 AM</u> E.S.T.			
UR SIGS <u>QSA 5</u> <u>R 6</u>		QRI <u>PDC</u> QRM <u>SUM</u> QRN <u>SUM</u> QRG <u>40</u> MC.			
A R L	<b>W8CBF</b>				A R L
XMTR: 210 Xtal, 210 Doub., 50 Buff., Ux 852 Amp. RCVR: 1 RF es 2 aud.					
Remarks <u>I sent your expressions of Hope of Baby to Lindbergh.</u>					
PSE QSL? <u>NO</u>		GIVE US A BUZZ		JAMES A. PORTER, Opr.	
<u>Copied for you on Loud Speaker June 23, 73</u>					

continued next page

ARTHUR D. EVANS, 21 Glyndon Ave., Brighton, S.S., Victoria  
AUSTRALIA

V  
K  
A  
D  
E



ANTENNA

40 m 2 wire 20 ft

RECEIVER

of set 4 push button

TO RADIO

VK3-DC

Yr. phone... sigs.

red hr. 12/2/55

from 12.55 to 12.10

to 4.0 P.M.E.S.T.

Q.R.G. 4.0 max.

R.A. Q.S.B. Q.S.A. Q.R.H. Q.R.N. Q.R.M.

Remarks: 12/2/55: Daily 9.00 am to 12.10 pm

P.S.E. Q.S.L. O.M.

Best D.X. and 73

(P.T.O.)

## VKADE: SWL feedback much appreciated

Not a QSL card missing a numeral in its prefix but a pre-war short-wave listener (SWL) report. Reports from SWLs were much welcomed in pre-war days since DX and even interstate contacts were not easy to obtain, considering the relatively simple equipment (almost always 'home-brew') and the low power used.

Callsigns used by SWLs took many forms such as VK3QSL, VK-DX and VK-SWL. Like the QSL shown, the initials of the SWL were frequently used in the callsign. This particular QSL dated 12 May 1935 belonged to Arthur D. Evans, currently VK3VQ and the Hon. Secretary of the Radio Amateurs Old Timers Club

of Australia. The QSL is rather unusual in that it is amongst the very few pictorial QSLs printed before the war.

Arthur's contact was on the 40 m band with VK5DC Elmore Shepard, 'the Voice of Norwood', who was licensed at the time to play music on the air. In fact, on the reverse side of the card Arthur gives

some details of his reception of the song 'Smoke gets in your eyes'. The hours of commercial radio transmissions were, at the time, not as extensive as they are today, many listeners throughout Australia welcoming amateur radio transmissions, particularly on a Sunday morning.

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## Are you handling the estate of a SK?

The WIA National QSL Collection could benefit greatly by your forwarding to the Hon Curator any QSL cards belonging to the deceased estate.

Postage costs can be refunded, but please first phone Ken VK3TL the Hon Curator of the collection on (03) 9728 5350.

Your assistance and help would be most appreciated.

Ken VK3TL

# SEANET 2002 Convention

Perth November 1<sup>st</sup>, 2<sup>nd</sup> & 3<sup>rd</sup>.

By Barrie Burns VK6ADI

**The 30<sup>th</sup> Seanet Convention will be held in Perth W.A. on the above dates and hosted by the Northern Corridor Radio Group.**

I have been involved with Seanet for over 10 years and felt the need to put pen to paper and tell my fellow VK Amateurs of my enthusiasm and experiences of being involved with the Seanet organisation.

For the uninitiated, Seanet stands for South East Amateur Radio Network

Seanet was established in 1964 on 20 metres (14.320MHz) commencing 1200 UTC.

The objective of the Net is to promote fellowship among the Hams as well as passing on DX news, testing radio equipment and handling medical and emergency traffic.

The early Amateurs involved in the Net decided to have an "Eyeball Meeting" and the first Convention took place on an Island of Penang, Malaysia, in December 1971 and was attended by about 30 Amateurs.

Since then the numbers have grown to up to 200 - 300 delegates at some of the Conventions and include many Countries attending outside of Asia.

I first became involved in Seanet in 1992 while I was in Darwin. My callsign was VK8DI which I still retain and may be remembered by quite a few of my fellow hams as I was quite active from Darwin for over 30 years.

In 1990, Gary VK8GW, gave us a talk at the Darwin Amateur Radio Club on his attendance to the Seanet Conventions in Malaysia and Thailand and told us of the great times and friendships he made with the South East hams.

He convinced the DARC members that Darwin should host a Seanet Convention to promote Amateur Radio in Australia and this took place in 1992 and was attended by approx 60 delegates and partners from overseas.

With the success of this one, Darwin was host again in 1997... this too was very successful

The Convention runs over 3 days with fellowship, banquets, tours and Technical planetary and discussion sessions organised by the host country.

In 1994 I attended my first overseas Convention held in Malacca, Malaysia and never looked back since.

So how come Perth got it in 2002 when we are outside the South East Asia region.

I moved down to Perth in 1997 when I retired from the N.T. Public Service and settled on a little 100 acre property just outside of Beverley with my XYL Judy.

In the year 2000 I attended the Seanet Convention in Pattaya, Thailand as a VK6 with two other delegates from W.A., Ben VK6XC and Eddie VK6AEA.

During the Convention we were approached by several Asian hams about the chances of having a convention here in Perth as a lot of them relate to Perth through business, family and property interests, besides they said, it is the prettiest state in Australia!

The three of us discussed the request and decided that if we can get a Radio Club in Perth to support us .... We would give it a go.

We approached the Northern Corridor Radio Group with our submission and to our delight the members supported the concept as it gave them a challenging project as well as helping to promote Amateur Radio in Australia. They could also combine the Convention with their annual "Ham Fest" exhibition for November 2002.

The NCRG is a very progressive club with some 60 odd members and operate their own station VK6ANC as well as Repeaters, Packet Radio and IRLP networks.

For those who have not been to one of these Conventions, I would urge you to give it a close consideration as Perth is a good place to visit in November and the experience that is gained by meeting and "eyeballing" fellow hams from overseas is unsurpassed as well as participating in events arranged by the host club.

Additional information on the Seanet Convention can be

acquired from our web sight [www.qsl.net/seanet2002](http://www.qsl.net/seanet2002) or by writing to Secretary Ben Koh VK6XC PO Box 7 Forrestfield W.A.

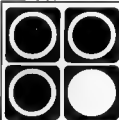
The Seanet 2002 Committee members are -

**Chairman** .....Trevor Ward VK6HTW  
**Secretary** ... Ben Koh VK6XC  
**Treasurer** ... Eddie Reaco VK6AEA  
**Hospitality** ... Barrie Burns VK6ADI  
**Technical** .... James McBride VK6FJA  
**Advisers** ..... Ian Johnson VK6HWJ & Ebby Lucas VK6DJ  
**Overseas coordinator** ...LikWei VK6YLW

The committee and NCRG members wish to acknowledge and thank the Federal and State WIA for their financial support in running this Convention as it will benefit the awareness of Amateur Radio in Australia.

Looking forward in seeing as many VKs as possible in Perth in Nov. 2002.

73s de Barrie VK6ADI/VK8DI



**SEANET**

SEANET has no permanent Secretariat as such, the devoted net controllers work out a schedule among themselves to run the net.

It is through the net controllers that the net has been useful in many ways such as passing news on DX and DX-peditions, handling emergency and medical traffic amid assigning frequencies for stations wishing to work each other, although SEANET is not a DX net.

Members of this 37 year old network that spans both the most crowded areas of the world Indonesia and most sparsely populated Micronesia, can take credit for many actual life saving communications activities, such as answering distress calls from yachts and handling traffic for medical emergencies and special medicines.

**SEANET 2002**

# The Contest

**Saturday 24<sup>th</sup> August at 0600 UTC to Sunday 25<sup>th</sup> at 1159 UTC.**

August is a busy month on the radio. For ALARA members our own Contest is the most important. Let us *all* participate this year. Let us renew the special YL friendships that are part of membership of ALARA by talking to each other, not just once, but several times during the ALARA Contest.

With the new format introduced last year we can make contact with each other again and again as long as we allow at least an hour between contacts, and the two evenings also allow us to use 80 metres twice. So let us not miss out.

The Contest runs from Saturday 24<sup>th</sup> August at 0600 UTC to Sunday 25<sup>th</sup> at 1159 UTC. Mark it in your diary now.

## The ALARA award and the 33 Award

As always, contacts made with ALARA members in our contest are permitted for inclusion in the list of ten (10) contacts with YL VK/ZL members - from at least five call areas - that are the requirements for this award. It is an attractive addition to your "Brag Board" as it has pictures of all the flower emblems of the Australian states in colour on it.

Applications for this award should be signed by two other amateurs who have sighted the ten recorded contacts in your log book and sent to Jean Shaw 10

OMs, please join in this very friendly contest. We love having you there and having a chance to chat with you. There is less pressure to make a massive number of contacts in the ALARA Contest than in almost any other radio contest, so hopefully we will see you there.

We were delighted to have a winner of the Florence McKenzie Trophy last year, when Pat VK3OZ won it, so let us try again this year. Pat is one of the regular CW operators among the YLs these days but she is not alone, we all can send and receive a CW contact even if we do not do so often.

Florence McKenzie was, we think, the

very first YL operator in Australia so it is fitting that her trophy is awarded for CW contacts. She also taught thousands of men and women CW during WW2 so they could help our war effort as Jean Hillier (AR June 2002 "Women in Radio") did. If you hear someone ask for a CW contact, please help them make up the numbers for our special trophy. Anyone asking for special contacts will be patient if your speed is not very high, but do have a go.

Most importantly in the ALARA Contest, send your log in to the Contest Manager, Marilyn VK3DMS 99 Magnolia Street, MILDURA 3500 or by email to gdsymes@hotmail.com

## A few small tips on learning CW

Monday Net recently discussed how to learn for your CW exam. Everyone agreed that once you know your letters there is only one way to prepare for the exam. That is to listen, listen, listen - writing down what you hear all the time.

About how to learn your letters there was more discussion. Some learned the letters in the order of the alphabet a,b,c,... Some started with letters that have only one or two or three similar sounds e,t,i,m,... Some started with letters that have opposite sounds a,n,r,k... I learned using the system devised many many years ago by Margaret Mills G3ACC.

We all, except one, "heard" the sounds as 'dit and dahs', except Mary VK5AMD. She had no one to teach her or to tell her that that was the standard way to 'hear' the sounds so she learned them as 'pips and peas'.

However Mary had one special assistant. One of her daughters was a pianist. This lass made up sentences using the letters Mary was learning at that stage, then she 'sent' the sentences as a series of 'pips and peas' using just one note on the keyboard.

There are many ways to learn the same skill.

**Editors Note:** There is a good Learning program on the NZART web site and also I think on the TARC site

Huntingfield Dve, Hoppers Crossing 3029.

The 33 Award is for all amateurs who work 33 different YLs on any frequency or band (not including repeater contacts) during 2002.

A log showing the frequency, date and time and the first name of all the YLs contacted should be sent to Jeanne Parker WA6UVF 28400 Vista del Valle, Hemet, CA92544

Please enclose an IRC with your log which must be postmarked before Dec 31 2002.

## Remembrance Day Contest

The Remembrance Day Contest is on the weekend of August 17/18<sup>th</sup> and runs from 0800 UTC on Saturday evening to 0759 UTC on Sunday. While I doubt if too many of us will be staying up for the whole 24 hours I hope to see you on air sometime during that weekend.

While we none of us wish to glorify war we should acknowledge the sacrifices made by our men and women in the services during those crucial years. One way we can say "thank you" to them is by participating in the Remembrance Day Contest, especially if we are there at the starting of the contest and listen to the opening address.

Over the years there have been some very prominent people giving that address and I am sure this year will be no exception

If you read the rules of the contest you realise that whatever your licence type you can participate in the Remembrance Day Contest. Whether you have had your licence for years or are a new licensee you will find there is a large difference in the activity on the air during a contest compared with that at normal times. Contests always seem very exciting. Have a go this year, whether you have done so before or not, but be sure to put your log in if you make even as few as five contacts.

Logs count toward your state score in the Remembrance Day Contest so are very important. All the details for sending in your logs are in the June AR on page 43. There is a snail mail and an email address.



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### Adelaide Hills Amateur Radio Society

The Mid-year Dinner was moved forward to June this year at the request of the chef at the venue AHARS uses. The diners agreed it was a good idea to make the move so the dinner could be before the regular chef went on maternity leave.

The meal was delicious. This year there were no complaints at all from club members. It is not always easy to please everyone, whatever the activity.

The meeting in August will be back to the normal venue, the Blackwood High School in Seymour Road,

Blackwood. It will start at 7.30 although many members arrive before that than to take advantage of any bit and pieces available for purchase, on the back bench. There are often odds and ends from deceased estates or someone's shack cleanout. Someone else's junk is

always treasure to someone. All proceeds from these items go into club funds.

The topic for the evening in August will be "What to do When..." It should be an interesting meeting.

There is a website for VK5BAR on the WIASANT information board.

### Northern Corridor Radio Group HAMFEST 2002

HAMFEST 2002 will be held on Sunday the 3rd of November 2002 at the Cyril Jackson Centre in Bassendean, Western Australia. This is the same venue as last year. It will start at 8 am for Sellers and 9 am for Buyers and will finish at 1 pm.

This year HAMFEST will be held in conjunction with the SEANET (South East Asia Network) Convention. SEANET always attracts a large group of overseas visitors and thus this HAMFEST will provide a great opportunity for local exhibitors to show their wares.

The kitchen will provide a range of snacks and drinks and a place to sit and

enjoy these whilst you have an eyeball with new and old acquaintances.

Country and interstate visitors can, if they choose, stay overnight at the Acacia Hotel (incl Breakfast) and attend the SEANET convention Grand Dinner on Saturday night. Prices and details are available on the SEANET webpage.

There will be a number of attractive door prizes on offer.

For further information:-

NCRG webpage:  
<http://www.ncrg.org.au/>

SEANET webpage:  
<http://www.qsl.net/seanet2002/index.htm>

HAMFEST  
[jackborthen@bigpond.com](mailto:jackborthen@bigpond.com)  
SEANET: [vk6xc@qsl.net](mailto:vk6xc@qsl.net) or  
[vk6xc@eon.net.au](mailto:vk6xc@eon.net.au)

## PLAN AHEAD

# SEANET 2002

## Convention

1 - 3 November 2002

hosted by

Northern Corridor Radio Group

## NCRG HAMFEST

SUNDAY 3 November 2002, 9am - 1pm

at the

Cyril Jackson Centre in Bassendean, WA

## Club Secretaries

## This is your page

Publicise your coming event, or send news of your club to:

The Editor  
Amateur Radio  
34 Hawker Crescent  
Elizabeth East SA 5112

or email:

[edarmag@chariot.net.au](mailto:edarmag@chariot.net.au)



## A sad day at Newstead

**On May 16, I stopped monitoring at my former site at Newstead, after 45 years of pleasurable listening and DXing.**

I started off early in 1957 with a Kreisler D/W mantle radio, which had 540 to 1850 kHz and 6 to 18 MHz. In those days there was no digital readout so one had to rely on the announced frequencies. On short-wave the set also had a 910 kHz image which made it difficult determining which was the correct frequency.

I can remember that the first station I heard and logged in 1957 was, not surprisingly, the ABC Domestic Short-wave service from either Melbourne or Sydney on the 49 metre band. Sadly they are no longer with us.

My first antenna was just a string of wire slung up on to a curtain rail. It worked until I managed to get a proper outside antenna up a few weeks later. It was approximately 34 feet in length and a single strand wire. Ironically I have come full circle as my current antenna here in this unit is 21 feet of wire in a similar configuration.

It was so easy to hear the BBC Pacific Service on 7150 kHz with the 4 pm News, followed by "Radio Newsreel". Ironically it was relayed over one of the domestic networks on weekdays, allowing for comparisons of reception quality. Another regular was Noumea on 7170 kHz and I frequently used this station to assist my French comprehension while at secondary school.

The highlight of my monitoring at Newstead was hearing that Russia had launched the first man in space. I remember listening to a very excited announcer from Radio Peking, probably "Peking Pearl", reading the TASS dispatch. It was not announced over our radio stations for several hours and I well remember excitedly blurring this out to my incredulous family that Man was orbiting in space. They naturally assumed I was making it up and did not believe me until it was confirmed on the local ABC station several hours later.

Another major highlight was the Kennedy assassination on November

23<sup>rd</sup> 1963. I was woken early at around 8:30 am by my parents who had heard an item on the early morning news from Sydney that the President had been shot. I immediately turned on the AFRTS, which was on 11715 kHz from memory. They were relaying newsfeeds from the various American networks that he had been assassinated.

I can also remember hearing the Apollo Space Missions being relayed via ground stations back to Houston. They had audio buried underneath a multimode transmission and it was extremely difficult to decipher the speech. The link was very close to the 20 metre amateur band and the audio on the HF link was between 8 to 30 seconds ahead of that on the domestic media or VOA.

Now it is all over as all the antennas have been pulled down and receivers put away in storage after 45 years of activity at Newstead.

Incidentally the final station from my Newstead log was on 15070 kHz and remained a mystery for a while. It was at 0359 UTC on USB with full carrier, being very weak and it was playing "Please Release Me" with Englebert Humperdick. After the song had ended, the signal dramatically faded out, making it difficult to identify. It apparently was a Dutch hobby pirate station known as "Radio Alpha Lima International" and was only running 250 watts! The operator confirmed my report and alleges he is active mostly at weekends.

Despite closing the Newstead location, I emphasize that I have not given away short wave listening at all.

I am continuing despite the confines of this retirement village. It is not on the scale of my previous set-up yet I already have found that propagation here is quite different. I am now able to hear African signals on the Short Path, which was not possible at Newstead because of a hill 300 metres away blocking them. Radio Zambia comes in here very well on 6265

kHz from 2145 till sign-off at 2200. They seem to run a trivial pursuit competition with a female compere and they conclude their transmissions with their National Anthem, identical to one of the two tunes of the South African National Anthem.

Radio Finland has indeed ceased broadcasting in English and other languages via short wave, although programming in Finnish and Swedish continues. Kol Israel from Jerusalem found funding to continue their short-wave broadcasts from their July 1<sup>st</sup> deadline.

The broadcasting of programming via the Internet received a blow, following a decision of the US Copyright Office to introduce royalty charges, similar to those for radio and television. This is applicable primarily in the US and already two of the largest streaming audio sources there have either folded or are introducing fees to access their services. Tim Gaynor from Queensland is currently investigating avenues to put DX programming on the web.

Yahoo also had an audio streaming service, known as broadcast.com. Many international and domestic broadcasters had been signed up on this facility. Some will now have to put up their own sites outside of America or discontinue streaming altogether. American sites will be charging listeners who wish to use streamed audio.

The America religious broadcaster, Family Radio in San Francisco recently signed an agreement with Merlin, the British transmission broker, to use their worldwide facilities to air their programs, in addition to their Okeechobee, Florida site. The BBC World Service currently uses them to broadcast to Central and South America. I wonder if Merlin will use the Florida site for their other clients.

Well that is all for this month. Don't forget you can email me at [vk7rh@wia.org.au](mailto:vk7rh@wia.org.au) or via snail mail to 20/177 Penquite Road, Norwood TAS 7250.

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Andy VK3IV

# Beyond Our Shores

David A. Pilley VK2AYD

davpil@midcoast.com.au

## WRC-03 now in Geneva, Switzerland

The conference had been scheduled to be held in Caracas, Venezuela, but this is not now possible.

Citing economic concerns, the Venezuelan National Commission of Telecommunications (CONATEL) has advised the International Telecommunication Union (ITU) Secretary-General Yoshio Utsumi that it will be unable to host WRC-03.

Geneva has now offered to host the event and it is still planned for 9th June to 4th July. There are several issues of importance to radio amateurs on the conference agenda, including harmonization of the 7-MHz amateur and broadcasting allocations. Other Amateur Radio-related issues on the

WRC-03 agenda include the revision of Article 25 of the International Radio Regulations—the basic rules for the Amateur and Amateur-Satellite services.

Among other issues, this includes the issue of whether to retain the treaty requirement to demonstrate Morse code proficiency for access to amateur bands below 30 MHz.

Rest assured, wherever the conference is held, the IARU teams will be there to support the Radio Amateurs around the world.

We here in Australia, will have representatives there and we desperately need your support. Why not include a small donation with your next renewal subs?

## Satellite Communications Course

It is interesting to follow the ARRL's Certification and Continuing Education Programme.

The latest on-line course is Satellite Communications (EC-007).

This is the sixth course in the growing list of continuing education offered by the ARRL. QST Editor and satellite enthusiast Steve Ford, WB8IMY, developed the curriculum. The course contains material from Ford's articles, as well as new material. Resources were also provided by AMSAT-NA. Ford has written many QST articles on amateur satellites and is the author of ARRL's HF Digital Handbook.

The ARRL Satellite Course is intended

for amateurs who have never operated satellites before. The course opens with a review of amateur satellite history. Students will move on to a study of satellite tracking, orbiting relay stations, FM repeater satellites and the International Space Station. It continues with lessons and exercises on FM satellites, the Fuji Sats, AMSAT-OSCAR 40 setup and operation. The final lessons cover store-and-forward digital satellites, APRS and future satellites. Details about the ARRL Certification and Continuing Education Program are on the ARRL Certification and Continuing Education Web page <http://www.arrl.org/ccel/>.

## WRTC - 2002

This column was written before the World Radio Team Championship contest was held in Finland during the IARU contest July 13/14. Regrettably Australia (or NZ) was not represented in this great event, although we have had a team in the past two WRTC contests.

As a competitor from WRTC-96 I have been monitoring the WRTC Internet reflector. You would really be surprised at the 'hype' that develops from the teams just prior to the event. There is

much concern about competing in the sauna after the event!

Santa Claus, who lives in Korvatunturi, Lapland, has a bureau in Rovaniemi and is OH9SCL? So this Christmas keep an ear open for the great man, he may be able to add a new rig for you on his sleigh!

Finland is rated the least corrupt country and has a 100% literacy rate. Is it true that every one at Nokia has a ham ticket?

## The lights go out for Eddystone Radio, "silent key" after 89 years

July 6/7 2002 was to have been the the 90th anniversary of the registration of Stratton & Co as a limited company, they being the company from which Eddystons Radio evolved.

Those who are unfamiliar with Eddystone probably only know it as a producer of short wave receivers for use by radio amateurs and SWLs. The last of the line was the pretty, solidly made but very ordinary transistorised EC10, the circuitry of which differed little from that of el cheapo pocket portable radios of the era. Hence, many amateurs may have assumed that Eddystone went out of business years ago - not so.

Eddystone continued to make very sophisticated radios for use in commercial and military applications, often 'ruggedised and tropicalised', always with a high degree of reliability, incorporating built in test equipment ("BITE") for self diagnosis of failures. They also manufactured a great deal of broadcast transmitting equipment.

Some years ago they were taken over by Marconi before that company went "pear shaped", and later by "Megahertz Communications". Chris Pettitt, G0EYO, former MD, now patron of the "Eddystons User Group" revealed that

Megahertz, and hence Eddystone, had gone into administration, so they have gone out of business.

The Eddystons name, broadcast intellectual property rights and stock, have been sold to a small radio broadcast firm called SBS based in Hastings, England, with whom Eddystone had been working with for some years. The receiver side of Eddystone is now in abeyance and may not be resurrected.

### Off the hair and on the air

Perhaps the most remarkable thing about Eddystone is that it only came into existence in the 1920's due to a change in womens' hairstyles! Stratton used to make millions of hair-grips, but when suddenly long hair went out of fashion in favour of "bobbed" styles, the market for hair-grips collapsed almost overnight.

At that time radio was in its infancy, there was much interest in it as a scientific experimental hobby, and a market for high quality components was emerging. Eddystone satisfied that market, later developing into producing short wave receivers, and during the war, many items both radio and non-radio were produced.

Early in the war, the factory was bombed, and the local indoor swimming pool was commandeered for Eddystone to get back into production, which they did in a few short days. That factory was affectionately nicknamed "The Bathub" and Eddystone has remained at those premises to this day.

The callsign G6SL was allocated to Stratton for use at the pre-war Eddystone factory, and today is held by Chris Pettitt G0EYO.

The Eddystons User Group was founded in 1990, and is a non-profit making group for Eddystone Enthusiasts. It produces six 48 page "Lighthouse" newsletters a year, full of technical data, fault finding tips, historical articles and ads. Annual subs are 14.00 Pound Details from:

Graeme Wormald, G3GGL,  
15 Sabrina Drive,  
Bewdley, Worcs., 01299 403372.  
e-mail g3ggl@euophony.net

## Another all-ham crew settles in aboard the ISS

The crew of *International Space Station Expedition 5*, US astronaut Peggy Whitson, KC3ZTD; Russian cosmonaut and crew commander Valery Korzun, RZ3FK; and cosmonaut Sergei Treschev, RZ3FU, is settling in aboard the space outpost. The increment 5 crew is the second all-ham crew to serve a duty tour aboard the ISS. The Expedition 5 team will be in space for 4-1/2 months.

Scheduled *Amateur Radio on the International Space Station* (ARISS) school contacts are set to resume in early July, when QSOs are then penciled in with the Progymnasium Rosenfeld in Rosenfeld, Germany, and the Adler Planetarium and Astronomy Museum in Chicago. Other contacts with schools and educational institutions in the US and abroad are pending.

Although school contacts have been



Cosmonaut Valery G. Korzun (RZ3FK) (left), Expedition Five mission commander; Astronaut Peggy A. Whitson (KC3ZTD) and Cosmonaut Sergei Y. Treschev (RZ3FU)

on hold during the crew transition, all has not been silent on the ARISS front. Korzun occasionally has been active on 2 meters as RS0ISS and even made a few contacts during the U.S. Field Day in mid June.

(ARRL N/L 30/6)

### Short waves

#### Hamvention's decline

The decline of visitors to our local Field Day this year was not a one-off.

The great Hamvention held each year at Dayton, Ohio, USA has also been in decline over the past few years with attendance this year down to 24,832. (That's a greater number than Australia's licenced Amateurs).

They say their peak attendance was in 1993 when 33,669 attended. About a 28% decline over those years.

#### Pedal wireless? No, it's Recycled Radios

A vote in the European Parliament in April foreshadows that all electrical and electronic equipment sold in Britain after 2005 will have to be recycled at the manufacturer's expense.

Under new European legislation, householders will not be able to throw away unwanted electrical or electronic goods but will have to sort them out ready for collection and recycling. It is forecast that prices are likely to rise by up to 5 percent

**If you have news from overseas  
please email or snail me.**

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# Technical Abstracts

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Gil Sones VK3AUI

30 Moore Street, Box South, Vic 3128

## Copper wire current ratings and usage

The use of PVC insulated flexible wire to rewind transformers has come to my notice. This is potentially dangerous due to a misunderstanding of the current ratings often given in some catalogs. It has occurred due to the difficulty of rewinding transformer cores originally used in microwave oven transformers. These cannot be easily disassembled due to their construction. Rewinding low voltage high current windings is therefore difficult due to the need to fit thick and hard to bend wire onto the former.

The use of PVC covered wire as the winding in a transformer may be dangerous. Insulation may melt and lead to a short circuit and a fire with disastrous consequences. In order to fit the limited space available the wire may be too thin resulting in heat build up. The current ratings given in many catalogs for PVC covered flexible wires are for other uses and are not intended for uses such as rewinding transformers.

PVC covered wire ratings for other uses may be misleading. They make assumptions regarding use and ventilation which are different to the situation in a transformer winding. Ratings are usually given with regard to voltage drop or for an acceptable temperature rise under conditions which are usually well ventilated or cooled by air movement.

Mains extension leads are an example of a rating which is only valid with the lead laid out in a manner which ensures good ventilation and cooling. Operation coiled up can lead to a molten mess which many of us have seen.

Wire ratings are given for a specific application and should not be applied in a different application. The ARRL Data Book 1976 page 45 gives the rating of 16

AWG (B&S) enamelled copper wire 0.0508 inches diameter (1.29 mm dia approx 1.3 mm squared area) as 1-22Amps in open air, 13 Amps in bundles or conduit, 3.69 Amps in a transformer winding. As you can see the rating varies widely according to the use. Plastic covered wire would have a lower current rating due to the increased thermal insulation of the thicker plastic coating.

An alternative to a single hard to fit large cross section wire size is to use a number of smaller diameter wires in parallel. This is how a flexible wire is obtained. You should make sure that the parallel wires are the same length and gauge and have the same path around the former. Use wire which is rated for use in a transformer and has adequate ratings in such service. The wires should provide a winding with low losses and should be easy to wind. The lack of bulky insulation will give space to achieve a suitable winding. The enamel used on winding wire usually has good performance at transformer operating temperatures. You can measure and check the temperature rise in the winding using methods given in books on transformers and their design.

Microwave oven transformers are purpose built. They may look like conventional transformers but they are designed and function differently. They can be pressed into service but due regard should be given to the differences in design and construction.

They have magnetic shunts which should be removed for normal amateur service. The shunts provide leakage reactance used as part of a regulator arrangement. They also have other differences in construction. The insulation may be different at the ends of the High Voltage winding. This can lead to trouble if the winding is used in bridge or voltage doubler rectifier circuits. Information concerning these transformers has appeared in AR May 1998, Rad Com Jan 1998, and QEX Jan & Feb 1998.

A fire in a transformer could have very serious consequences. You should be very conservative when designing or rewinding transformers as the consequences of failure are severe. Your insurance company or a court may not be very impressed with your attempts to save a dollar in pressing something into service for which it was not intended.

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## Silent Key

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### Kingsley Brauer VK5AKN. A Tribute

It was with great sadness that we learnt of the passing of our good friend Kingsley in April 2002.

Kingsley was a foundation member of the 21.185 MHz Travellers Net and had been actively participating by assisting mobiles throughout Australia for about twelve years. He was a valued friend to all who were involved in the Net, regardless of whether they were mobiles,

base stations or fellow operators who ran the Net

He was a man who had true amateur spirit and worked diligently for amateur radio in many respects.

We are all thankful for the life of Kingsley and extend our sympathy to Maureen and the family.

Syd Harvey VK6SMH and 21.185 Travel Net controller. 03/06/02

*Editors Note.* Kingsley ran the WIA SA Division Slow Morse program for many years and his enthusiasm and determination to keep this program going, helped many aspiring amateurs get their ticket. We all owe a lot to Kingsley. VK5UE

### Top Drive

In Rad Com April and May 2002 Tony Preedy G3LNP described elevated feed of a mast with a triband yagi for operation on LF and the 80 and 160 metre bands. This involved insulating the yagi from the tower and feeding the system between the yagi, as top loading, and the mast which was earthed at the base. This resulted in improved efficiency particularly on the LF bands available to UK amateurs. The scheme is made much easier by the availability of remote tuners.

The idea of top feed or elevated feed originated in studies of shipboard antenna performance. The feed from the radio room high on the superstructure was found to perform very well as the structure of the ship acted as an earthed mast below the feed point. This gave better than the originally expected performance.

The remote tuner used should be one designed to match a wide range of impedances to a coaxial line at the power level in use. There are a number of remote tuners available which can match to random wire antennas which should be suitable. A low loss design should be selected.

There is a problem in insulating the Yagi from the tower. There are very large mechanical stresses on the rotating pipe that the yagi is clamped to and making this an insulator requires careful consideration. The materials used must be capable of handling the arduous conditions. Failure could result in the antenna coming down with very serious consequences.

Tony G3LNP used a length of "TUFNOL" rod which is made of phenolic resin bonded fabric to join the rotating pipe from the rotator to the pipe to which the antenna boom is clamped. This material was not cheap but was strong enough. The jointing piece is

shown in Fig 1. Use of a lathe is required to make this piece. It is critical. The rod came from RS components and the RS catalog number is RS 374-376. It was big enough to make two insulators. The insulator rod should be fastened to the steel tubes by using both epoxy glue and through bolting to fasten the whole assembly together.

The length of the insulating section is determined by the insulation requirements for the feed on the lowest LF band. The voltage appearing across the mast insulator is shown in Table 1. The gap is relatively modest for 1.8 MHz and 3.5 MHz but for LF it is much greater. Thus if only 1.8 MHz or 3.5 MHz

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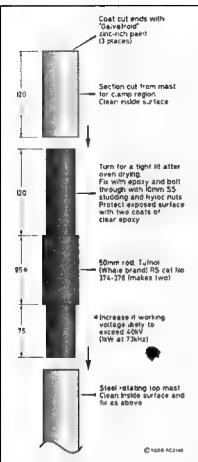


Fig 1. Insulator Used for Top Feed to Isolate HF Yagi from mast.

were to be used a shorter insulating section would be possible or some alternative insulating arrangement could be used. Remember though that the mechanical stresses must be considered and adequately provided for.

The computed feed impedance at the elevated feed point between the simulated HF Yagi and a grounded telescopic mast is shown in Fig 2. ELNEC was used to compute the feed impedance. EZNEC which is a later windows program from W7EL can be obtained as a free download from <http://eznec.com> in a demo form. The measured VSWR of the top feed is shown in Fig 3. The measured VSWR is without any attempt at tuning. For operation on 1.8 MHz and 3.5 MHz a remote mast head mounted auto tuner can be used to match to the coaxial feedline. The feedline can be remote relay switched to the beam bypassing the tuner for operation on 14 to 28 MHz using the yagi. The remote relay switch

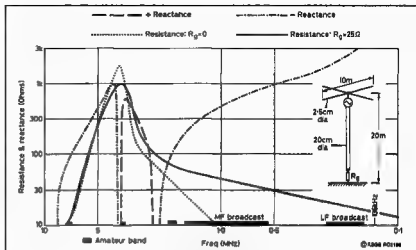


Fig 2. Computed Impedance of elevated feedpoint between simulated HF Yagi and grounded telescopic mast.

has to have good insulation but if LF operation is not required this should not be too hard.

The mast used was 20 metres high and resonance was just above 1.8 MHz and so a slightly higher mast would have yielded a resonant system. Cranking the tower down to 8 metres gave resonance in the 3.5 MHz band. A remote tuner gave operation on both 1.8 MHz and 3.5 MHz. The control cables should be screened and both the control cable screen and the coaxial cable screen should be bonded to the mast both at the top and at the bottom.

This feed system could be used with a mast and a large TV antenna to form a disguised antenna system. The tuner would appear to be just a large masthead amplifier. This might be a solution in some situations. The matching range of the tuner would be important as the system would be somewhat smaller.

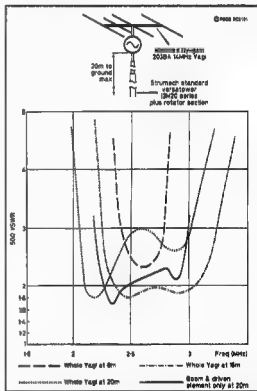


Fig 3. Measured VSWR without any attempt at tuning for top feed between HF Yagi and the top of a 20 metre high mast.

Table 1. Mast Insulator Requirements

Frequ MHz	Power dBW	Gain dBi	Tune & Feed dB	Input Ohms	Input Ohms	Parallel R Ohms	Potential V RMS	Gap mm
0.073	0	-24	-6	30	1000	1.4 M Ohm	37,000	93
0.136	0	-18.7	-3	21.7	160	0.79 M Ohm	11,000	28
1.85	26	-0.8	-0.5	26.5	450	470	460	1.2
3.6	26	-0.2	-0.8	26.8	480	1100	730	1.8

(0 dBW is 1 W, 20 dBW is 100 W, 26 dBW is 400 W and 30 dBW is 1000 W)

## Shortening Screws

An Idea for cleaning up the cut ends of screws that have been shortened appeared in the In Practice column of Ian White G3SEK in Rad Com April 2002. The idea comes from Colin G3VTS and is shown in Fig 4.

The idea involves the use of suitable Tape to thread a number of holes drilled in a plate. The holes near the edge are then slit using a small saw. The X-acto fine saw blades used by modellers which fit into an X-acto knife handle were recommended.

The slits make cutting edges which can be used to help clean up the threads

of screws which have been cut. The plate can be gripped in a vice when being used. The plate will help minimise the amount of filing required when cleaning up cut threads. It is cheaper than using a good die and if damaged it is cheap to replace.

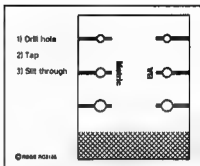


Fig 4. G3VTS plate for cleaning up screw threads. Plate can be gripped where shown at the bottom in a vice.

## Club News

### Gippsland Gate Radio & Electronics Club

GGREC is continuing its long list of events with the following details.

Publishing dates of AR prevent notification of earlier events but starting on August 11<sup>th</sup>, we are holding a bicycle ride (or walk if it gets too steep) at Lysterfield Park.

The ride / walk will be followed up with a BBQ in the above park. This is a day that anyone can attend. Don't stay away because you haven't got a bike. There's plenty for us non-riders to do as well. More details will follow in the Club mag, or on our website. This is a good chance to advertise that also at [www.ggrec.org.au](http://www.ggrec.org.au).

GGREC has a general meeting every third Friday of the month with the meeting on August 16<sup>th</sup> featuring David Wilson who will rekindle our interest in TEN TEC equipment. Promises to show some good gear. At 8 or you're late.

September has several events taking place beginning with our monthly Prac. Night on the 8<sup>th</sup>. These so called "Prac." Nights are popular with the members and often become a great occasion to simply catch up with others and talk.

Discussion doesn't always revolve around Amateur Radio thus adding extra spice to the evening. These meetings as well as our general meetings are open to all who wish to come and play with equipment or simply to "catch up". Members and visitors are encouraged to attend.

Peter Payey (the Pros) who leads a double life as our Amateur exam coordinator wishes to announce that the next exam will take place on the 7<sup>th</sup> September. Applications will close on the 16<sup>th</sup> August for this one but keep in mind that Peter organizes regular exams so contact him on 03 5998 3533.

Rog VK3UK has organized another Pub night on the 14<sup>th</sup> September and has kept the details to himself at the moment. Keep in touch and I am sure we can extract the relevant information from him before the day.

At our meeting on the third Friday of the month, the 20<sup>th</sup> September, I have succumbed to numerous requests to give

a demonstration of X10 remotely operated electrical controllers. (Well at least one person asked me to do it)

This equipment has a few gimmicky applications as well as serious ones, but there may be a place in your home where remote switching of lights or power may help your lifestyle. Some of this gear is take home and plug-in.

Oh by the way - who am I? Well you'll have to come and see on the 20<sup>th</sup> September. 8 p.m. is a good time to arrive at the Clubroom in the Girl Guide Hall, Grant St Cranbourne.

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## VK1 notes

### Forward Bias

The guest speaker at the general meeting on Monday, June 24, 2002 was Darryl Hill. Although not a radio amateur but an electrician who is had become an Electrical Inspector was involved with training, Darryl had close associations with radio amateurs throughout his life. Many of his colleagues were either licensed or CB operators.

The subject that Darryl spoke to was Electrical Safety. This is a subject close to our hearts, because the hamshack is usually a ramshackle entanglement of wires, coax, and power cords improperly terminated or dangerously overloaded. Darryl was usually horrified whenever he entered any of his mate's ham shacks. However, there was light at the end of the tunnel. He said that the industry was adhering to a set of Australian Standards that imposed limitations on work practises, manufactured products and components, and the circumstances under which a person was permitted to work on electrical installations.

For hams, this is an important issue because most of us assume that we know everything there is to know about electricity, but how wrong can you be.

It appears that anybody can work at installations that carry ac voltages not higher than 50 volts, and dc voltages not higher than 120 volts. The reason for this latitude is that these voltages are not considered to be life threatening! Darryl

brought along a box with samples of electrical connectors, sockets, general power points (GPOs), and cables of all kinds that had been the cause of a home fire.

He showed how electric blankets can cause fires, and how, by being inattentive to standards, cable extensions and multiple GPO boards are easily overloaded, and causing fires. At this latter stage in the proceedings, Kerry Richens (VK1KRF), very ably assisted Darryl by demonstrating what happens to electrical installations when they are subjected to acidic and sulfuric gasses. With photographs, he showed how wiring and electrical terminals could quickly disintegrate if not inspected on a regular basis. Kerry also showed three items of test equipment from his workplace used to test appliance specifications and their electrical safety. All in all, it was a very useful couple of hours that we spent with Darryl and Kerry.

**A change of name.** The symposium that is to be held in Canberra on Sunday, 17 November had its name changed to "One Tech '02". This was necessary, as "Can. Tech. '02" was a name too close to the name of a company operating in the ACT.

**A volunteer is required to take over the job of "Manager - Inward QSL cards".** This position has been filled by

**Peter Kloppenburg VK1CPK**  
Ray Reinholtz (VK1PRG) for the usual term of three years, and now needs to be handed over to another member. The job description is rather short: 1. Collect QSL-Card packages from the City Post Office on a weekly basis. 2. Sort QSL cards by the recipients' call signs. 3. Deposit sorted cards in the QSL-Card Receptacle. 4. Attend general meetings.

Detailed instructions about how to deal with the monthly membership list, cards for non-members and non-financial members will be provided during hand-over. Interested? Call Ray on 6288-4804 or Peter on 6231 1790.

The Division is sponsoring the establishment of a 6-metre beacon in the ACT. Anyone interested in participating in this project call Peter on 6231 1790.

**Who is doing what?** Dave Webb got a pass for the Novice theory examination in March this year. Peter Kloppenburg (VK1CPK) is building Crossed-Field-Antennas and having success with them. Bob Howie has donated a 240/110-volt autotransformer to the Division to energise the valve tester, which can now be used by our members. Peter Ellis is using steel wire to manufacture a couple of centre-loaded whip antennas for mobile use. The next General Meeting will be on Monday, August 25, 2002 at 8.00 pm in the Scouts Hall, Longerenong Street, Farrer.

Cheers.

## VK2 notes

**Pat Leaper VK2JPA**

### Radio VNG Extension

In a letter received by the Parramatta office, Dr Richard Brittain, Legal Metrology Officer/Secretary National Time Committee, has advised that the National Standards Commission has decided to extend the Radio VNG Service to the end of 2002.

### Education news

Prospective amateurs who are studying

Theory, Regulations and Morse code on their own to gain a licence are advised that the VK2 Education Officer will be on hand at the VK2 offices on Monday nights, from 7 pm to 9 pm to assist with any study problems. The office is located upstairs at 109 Wigram Street Parramatta, and parking is available beneath the building.

Here are examination dates for the remainder of the year, closing dates for applications in brackets - 8th September

(29th August), 20th October (10th October), 1st December (21st November).

### Bookshop on Line

Readers with Internet access can now find the division's bookshop "On Line" Fire up your favourite web browser on [members.ozsmaail.com.au/~vk2wl/bookshop/](mailto:members.ozsmaail.com.au/~vk2wl/bookshop/)

That's all for this month, see you next time.



# VK3 Notes

By Jim Linton VK3PC

WIA Victoria web site: [www.wiaviv.org.au](http://www.wiaviv.org.au)

email: [wiaiviv@wiaviv.org.au](mailto:wiaiviv@wiaviv.org.au)

## Ron Wilkinson Award

Nominations are invited for this annual WIA award that recognises special achievement in any facet of amateur radio.

The award is named in the memory of Ron Wilkinson VK3AKC who set a number of VHF and UHF distance records over the post-WW2 decades, including work on 1296 MHz moonbounce.

Do you know of a single individual, or a group of radio amateurs who are special achievers?

Then propose them to the WIA Victoria Council with a full explanation of why you think they deserve this high recognition.

## Does WIA Victoria communicate?

A survey of those who buy Amateur Radio magazine at newsagents throughout Australia indicates that they believe the WIA is not communicating well enough.

The fewer than 200 respondents to the survey feel the WIA can communicate better about what it is doing.

This finding is a little puzzling to WIA Victoria. The WIA Victoria Council considers that, through its website and other media, it has been communicating effectively, particularly in the past year or so.

Perhaps our website is not being read by those non-members who are now buying AR magazine? Or maybe their comments concern perceptions formed years ago, or relate to some other WIA Divisions?

The WIA Victoria Council would like to hear from any member who has views on this matter, and suggestions of how

we can better communicate within the restraints of our resources. If you are a non-member reading this in AR magazine, we'd like to hear directly from you too.

## QSL Bureaux

A reminder that WIA Victoria operates both inwards and outwards QSL Bureaux free to members as a membership service.

It is necessary to make application to register for the Bureau to receive or send cards.

Information sheets and registration forms are sent to all new members and available on request.

The savings in postage by using the Bureaux certainly make this a very worthwhile service for many members active on the HF bands.

## Contest and special event activity

Putting the Wireless Institute of Australia (WIA) in this year's IARU HF World Championship 13-14 July was VK3WI, using a mix of Phone and CW.

WIA Victoria Councillor, Jim Baxter VK3DBQ operated VK3WI and reports that many DX stations were very pleased to score the WIA zone in their log.

The contest rules call for participants to exchange their ITU zones, or headquarters stations use their official IARU member society abbreviation.

Jim VK3DBQ said it was a very friendly contest and a number of contacts were the result of mentions in DX news bulletins that the WIA zone would be on air.

Poor conditions made it difficult going, but VK3WI made 146 contacts including 40 other IARU headquarters stations, and a total of 36 countries.

Earlier AX3ITU, the special event call sign of WIA Victoria for International Telecommunications Day, was much sought after both locally and overseas.

Members of WIA Victoria affiliated Eastern and Mountain District Radio Club, activated the call sign during the 24 hours of 17 May, making just over 300 contacts.

The club reports that its HF phone operators were Tom VK3ZZ, Keith VK3FT, Gwen VK3DYL and Carl VK3EMF. While Drew VK3XU as usual picked up better than a contact a minute on HF CW.

Contacts were also made in IRLP by Ken VK3HKK, and white cane operator Dave VK3AAD operated on both VHF and UHF, with Peter VK3DI briskly entering the contacts in the log.

Although the total number of contacts is slightly down on last year, when the conditions were favourable, the contact rate was very good.

## Another GASS display

WIA Victoria and a number of its affiliated clubs will mount an amateur radio display at this year's Great Australian Science Show (GASS).

The event coordinator, WIA Victoria Councillor Barry Robinson VK3JBR, Secretary John Brown VK3JB, and club representatives have already met to plan, resource and roster the display.

GASS attracts school students, teachers, parents and the general public from throughout Victoria, and should be an excellent opportunity to promote our hobby.

Held at the Melbourne Museum, the amateur radio on show segment is Friday 23 to Sunday 25 August, the last three days of Science Week.

### Club secretaries please note

The pages of *Amateur Radio* are freely open to all radio clubs which are members of WIA. With the news-stand distribution of the magazine this represents an excellent opportunity to put the activities of your club in front of potential new members. Contact the editor for details of style form and deadlines.

### Amateur radio suppliers please note

*Amateur Radio* is the only widely available print vehicle that specifically targets amateur radio in Australia. With the news-stand distribution of the magazine this represents an excellent opportunity to put your message in front of 6000 customers each month. Call *Newsletters Unlimited* (03) 9756 7797 for details.

# VK4 Notes

Allister Elrick VK4MV

## Qnews

### Fast Tracked Exams

Mike Jenner VK7FB the Divisional President of Tasmania has told his members "One of the most enlightening things that came up during the informal session of the WIA AGM was when Ron Bertrand from VK4 spoke about their education programs and "cram course" for the Novice Licence. Ron claims a 90% pass rate for a 3-day 'cram' course! That's right, 3 days! The course in its extended form is conducted as 45 minutes a day for 3 weeks.

VK7FB intends to follow up on these ideas and will make it one of his aims this year to instigate some of them in Tasmania. Others who'd like to know more contact the Gold Coast Amateur Radio Society ([www.javerang.com.au/hamradio/gcarsi/](http://www.javerang.com.au/hamradio/gcarsi/)), Secretary Sue VK4VAA on (07) 5545 0955 or VK2DQ Ron Bertrand via <http://www.radioelectronicschool.com>

### Hams on Air

WIN-TV coverage of the new after-hours doctor call diversion system being trialed in Townsville centred around the QLD Ambulance communication centre in Hugh Street. Amongst all the officials seen, was Len VK4ALS who is one of the main instigators of the project.

ABC-TV and the Nine Network out of Brisbane on Tuesday May 28th covered the trial of a new bushwalkers emergency beacon and showed in an extended shot - the receiver used by ground search parties to pinpoint the beacon. Did that receiver look very familiar to followers of ARDF in VK? It's an EPIRB DF receiver designed and built

*Amateur Radio has been appearing on newsstands for the last four months.*

*It will continue to do so.*

*It is the only local amateur radio magazine publishing regularly.*

*Divisions are urged to provide their message for publication so that news of amateur radio activity can reach as many people as possible through the pages of*



by Ron Graham Enterprises of Sarina QLD. The amateur radio world knows Ron by the callsign VK4BRG.

The Townsville Sun May 28th carried a half page article on Heather and Steve Watson. Amateur Radio gets a mention as hams know Steve as VK4SGW, your friendly Australian Radio Scouting Coordinator. Real radio (well ABC wireless) rates a mention, as Heather is on air during their local morning show with a "Law" segment.

### True Old Timer

Henry Fulford, VK4AHF, has just reached another milestone in his eventful life, 90 years of living! Henry recently celebrated his 90th birthday in Atherton. He resides at Carinya Hostel with his wife, Alice, and is still active on the ham bands and is often heard on the local two metre repeaters.

### Well Done Awards

Recently during festivities at South Mission Beach for FNNQARG, WIAQ Vice President Gavin VK4ZZ presented Don VK4MC with his "Thank You" certificate from WIAQ for work done during council year 2001-2. Wally VK4DO received his Merit Award and Badge from WIAQ, the badge presented by WIAQ FNQ Rep and Councillor Dale VK4DMC and the certificate presented by WIAQ Vice President Gavin VK4ZZ.

### Worth Repeating

VK4RSC, 146.850 and 438.075 is in its final operating place after the erection of a new mast, the repeater is housed in the club's own shed on the edge of the Maleny escarpment with a new tilt-over free-standing mast engineered by club member Wayne VK4SWC (Salt Water Crocodile). Repeater manager Len VK4ALF would appreciate it if you could call in on 146.850 after a broadcast to give them an idea of coverage.

Testing is taking place to link the 438.075 repeater to the Darling Downs Area VHF repeater on the Bunya Mountains to foster more activity on the 70 cm band. Recent tests on Monday had a link to Dalby via the 438.075 repeater,

using a sub-audible tone of 162.2Hz. The results are very gratifying, and the Dalby Repeater has never been so busy according to SCARC users.

### FNNQARG

The get together at South Mission Beach was a great success again this year, although setting up Friday was conducted in a tropical downpour, there was sun for the rest of the weekend.

Those attending took part in such diverse activities as a trip to the Tully Markets, which resulted in many strange things brought back. The Saturday Night concert by Electrical Caution, the band of renown, had everyone tapping their feet and singing along. Saturday Night also saw a Karaoke session happening thanks to Ian VK4ZT's midi-text Karaoke program on his laptop computer. Sound was amplified and it was amazing to see that everyone knew the words to the ABBA songs!

ARDF RadioSport, first back home after finding all the beacons, including the one hidden behind the reception desk, Ian VK4ZT. The FNNQARG Cricket Match, and Cairns/Atherton won the match. The out of the trailer auction had some amazing treasure, and raffles, 1st prize, a ICOM IC-Q7A pocket rocket donated by Navcom Electronics was won by Matt VK4HAM from Cairns. 2nd prize, an ICOM IC-V8 VHF handheld donated by ICOM Australia was won by Wayne VK4WDM from Alice River. A great weekend - just need a holiday now to recover from it! It's that great - FNNQARG! More reports and all the activities in Townsville at [www.vk4tub.org/tarc/](http://www.vk4tub.org/tarc/)

### Sunfest

The Sunshine Coast Amateur Radio Club Hamfest will be held on Saturday 7 September in the Woombye School of Arts lower hall, with doors open at 9.00am. For further information and table bookings contact Ron VK4GZ, telephone 5448 4063, e-mail [sunfest@scarc.net](mailto:sunfest@scarc.net), or PO Box 80 Nambour 4560.

73's from Allister VK4MV

**Essentially a licence in Amateur radio is a licence to learn. The licence is a beginning, not an end.**

This is my first article as Federal Education Co-ordinator. I take on this role fully realizing I am stepping into very big shoes. Brenda, VK3KT, has worked with dedication, enthusiasm, and creativity for just so long.

I am sure I have the support of all readers, and many more who are not readers, in extending to Brenda a great thank-you for all her efforts. Words cannot express the debt of gratitude we all owe Brenda.

In this the first article I will briefly introduce myself and share with you some of my vision for the future.

I first became involved in electronics and radio when, at about the age of nine, I helped a grand-uncle finish a multi-band HF receiver that had been featured in the then "Radio and Hobbies". In my early teens I helped rebuild the radio from scratch with new components on a new chassis.

In my mid-teens I scrounged enough components and the appropriate valve to add a BFO to the receiver as that was about the time SSB transmissions were starting to appear amongst the amateur signals.

It was much later in life, in the mid-70s, that I became a licensed operator.

My professional career as an educator started in the late 80s. I have been a science and mathematics teacher for most of the time since then. My speciality is physics.

For the past five years I have been a lecturer in the university system working for faculties of engineering, education, and science. I am currently at the James Golston Faculty of Engineering and Physical Systems at Central Queensland University. I

mention this particular faculty as, along with the education faculty, it has very innovative and effective educational practices, which produce professionals of a quality that the other institutions can only be envious of.

As a professional educator I have a history of innovation to achieve high levels of quality learning and, so the locals tell me, I have an ability to see the real issues lying behind smokescreens of various types.

Education is just so basic to amateur radio. One of the fundamental purposes, to me the most fundamental, of amateur radio is self-training. Essentially a licence in Amateur radio is a licence to learn. The licence is a beginning, not an end. You don't have to look very hard to see that much learning does take place in amateur radio activities in all sorts of ways and in a very diverse range of technological and social areas.

So part of my vision is to encourage this life-long learning and as far as possible to remove barriers which prevent or restrict life-long learning.

Amateur radio is an activity firmly based in technology. As any student of history can tell you, technology has developed, and is still developing, at an ever increasing rate. So the next part of my vision is to have organizational, regulatory, and educational, structures and procedures so set up that they can readily respond to advances in technology.

Two examples of where current systems have failed, or at least are certainly groaning, are the debate and problems with the Internet and amateur radio, and the increasing complexity in the exams as more and more digital

modes and integrated circuits are added. We need a system that is proactive here rather than reactive.

The third part of my vision links all the previous ideas together. The entry qualification procedures, exam system if you like, needs to be based on the real ethos of amateur radio as a licence to learn. The system needs to reasonably utilize appropriate modern technology and be able to readily respond to developments in technology. Further the system needs to appropriately utilize the best of educational practice in areas such as syllabi specification and assessment procedures.

The last part of my vision I will mention is essentially the idea of "recognizing prior learning". This is well established in other areas of education and training.

I am very interested in utilizing the resources of the whole spectrum of education to be able to ultimately accept assessment systems from institutions which may not assess in the same way as is practised currently by amateur radio, but develop learning to an appropriate standard for amateur radio qualifications and can certify that standard. This is closely linked to how we specify our syllabi.

If I were to attempt the difficult task of summarizing my vision it would be to try to be ahead of the action rather than reacting to the past. If we pride ourselves as understanding and using technologies from the past, present, and the future, and for us this is a good recipe for growth and fun, then we need an educational structure that supports and enhances the wide diversity of activities which is amateur radio.

## New WIA Members

The WIA bids a warm welcome to the following new members entered into the WIA Membership Register in JUNE

L41088	Mr A Clarey	VK2RO	Mr R J Conway	VK3HAT	Mr A Trumble	VK6XT	Mr R S Hill
L60426	Mr M J Bell	VK2TRA	R E Archer	VK3HY	Mr G W Brain	VK7GO	Mr R J Wing
L60427	Mr I Garnett	VK2TSB	Mr S R Benko	VK3MDI	Mr C McGregor	VK7YBY	Mr D Andrews
VK1RY	Mr F W N Ryan	VK3CEM	Mr F McCowan	VK3UPR	Mr P B Rowan	VK3IRL	Bass Amateur
VK2DSG	Mr L A Keppie	VK3DGZ	Mr D Harrod	VK4GE	Mr E G Ginn		Radio Group
VK2JRL	Mr R L Torv	VK3FGE	Mr D Bell	VK6BK	Mr A M Petch		
VK2LRS	R D A Sinderberry	VK3FGY	Mr J Ferguson	VK6CV	Mr A J Preston		
VK2PEB	J F Pincock	VK3FKB	Mr P Shanahan	VK6HTW	Mr T W Ward		

# How's DX?

Ross Christie, VK3WAC

19 Browns Road, Montrose 3765, Vic.

Email VK3wac@aol.com

It appears that the financial pressures common to us all are beginning to make themselves felt at an international level. A recent bulletin from the ARRL reported that due to extreme financial pressures Venezuela was unable to host the World Radiocommunications Conference 2003 in Caracas. The Venezuelan National Commission of Telecommunications (CONATEL) recommended that the ITU seek an alternative venue. The ITU was placed under a great deal of pressure to find an alternative host for WRC 2003. After some hurried meetings the ITU staff have arranged to have the WRC 2003 held in Geneva Switzerland over the period of the 9<sup>th</sup> of June until the 4<sup>th</sup> of July 2003. The ITU staff should be commended for finding an alternative in so short a time.

Two important issues concerning amateur radio will be discussed, one is the realignment of the 40m amateur band and the other is the use of Morse code (CW) on bands below 30MHz.

North Korea is still making an impact on the amateur bands in the guise of Ed, P5/4L4FN. Ed has been very busy at work and on the bands, especially 15m. To try to increase the number of modes and bands on air from P5 Ed has been busy assembling various pieces of equipment sent to him by his QSL manager Bruce, KK5DO. Bruce says that the equipment, a HEX beam and rotator, a complete satellite station and the 8, 12 and 17m options for his existing Butternut vertical should see Ed on AO-40 (SSB only) and 6m soon. The HEX beam will give Ed the ability to 'aim' his signal to specific target areas.

Ed, P5/4L4FN is also quite active on RTTY. So much so that Don, AA5AU, has put together a special internet page to help those who wish to try this mode and score themselves a contact with P5. The internet page can be found at <http://www.aa5au.com/rtty>

The web page has details on how to download a program called MMRTTY, how to load it into your PC and how to get started on RTTY. According to Don every current DXCC entity has RTTY privileges, except BS7, and RTTY is invariably one of the modes operated by the many DXpeditions. If you want to

contact Don directly with a question he can be reached at [aa5au@bellsouth.net](mailto:aa5au@bellsouth.net) and will happily answer all queries.

The celebration of the Queen's Golden Jubilee has come to an end. According to comments furnished from visitors (amateurs and members of the general public) the event, GB50, was probably one of the highest profile special event stations ever mounted in the UK.

For the operators who manned the stations it must have been something extra special being involved and surrounded by the pageantry and ceremony that centred around Windsor Castle. The special event stations managed 24,727 QSO's from 145 DXCC entities and every day hundreds of visitors dropped by to witness for themselves the operation of the amateur radio stations specially set up for the occasion.

Many of the visitors were allowed the opportunity to exchange greetings on air with other members of the public in other countries. These visitors also showed a lot of interest in the RSGB's 'Amateur Radio Experience' exhibition. This can only be beneficial to the ranks of Amateur Radio in the long run. Visiting amateurs from as far afield as JA, W, ZS, ZL and VK also took the opportunity to operate the stations. Some statistics;

Band	QSO's
80	461
40	4124
30	1483
20	4187
17	3921
15	8790
12	1408
10	1174
6	849
2	370

Mode	QSO's
CW	12,221
SSB	12,214
FM	128
RTTY	113
PSK	53

Don Fields, G3XTT, responsible for the publicity, deserves special mention for his efforts, and Owen Cross, G4DFI, also deserves thanks, especially after he has finished processing all the QSL cards

for the entire operation. If you managed a QSO with one of the special event stations then cards can be sent via the bureau or direct to Owen Cross, G4DFI, 28 Garden Avenue, Bexleyheath, Kent DA7 4LF, England.

## The DX

**5V, TOGO.** (1) Francois, VE2XO will be travelling to Lome, Togo for some recreation and will be active as 5V7XO over the period of the 25<sup>th</sup> until the 31<sup>st</sup> of August. He says that his preferred modes will be RTTY and SSB on the 10, 12, 15, 17 and 20 metre bands, possibly some activity on 6 metres too. QSL via home call to Francois Normant, 3054 avenue Lacombe, Montreal QC H3T 1L4, Canada. [TNX VE2XO and 425 DX News]

**OX, GREENLAND.** (2) Michael, OX3LG will be operating on HF and 6metres using SSB and CW from Kook Island (NA-220), Greenland between the 1<sup>st</sup> of August and the 1<sup>st</sup> of October. QSL via OZ1ACB, Allis Andersen, Kagsaavej 34, DK-2730 Herlev, Denmark. [TNX DL2VFR]

**SU, EGYPT.** (3) Bob Blumberg, K4RB, is a keen contester who has just been issued with an Egyptian licence, SU9US. Bob plans to take part in most CW contests and some SSB contests from his QTH in Cairo. QSL via K4DX direct only with a SAE with and IRC etc to cover postage. [TNX K4RB and OPDX]

**V51, NAMIBIA.** (4) Nick, ZL1IU, has a daily sked with Kosi, V51E, on 3793kHz from 0520 to 0535 UTC. He says signals peak at approximately 0530 UTC on this difficult path. Nick sets his antenna to beam at 45 degrees, over North America, which seems to be the most favourable path as they have been successful a number of times. Also, Aki, 5R8FU, who was S9 in NZ a few weeks ago has also been invited to take part in a sked between 1900 to 1945 UTC. Nick says he welcomes anyone who wishes to join in. [TNX The Daily DX]

## IOTA Activity

**FO, FRENCH POLYNESIA.** (5) Paolo, IK2QPR plans to be active using the call FO/IK2QPR from Bora Bora (OC-067) in French Polynesia from the 10<sup>th</sup> until the 14<sup>th</sup> of August. He will be active on all

bands 80 – 10 metres CW and SSB. QSL via the bureau or to IK2QPR, Paolo Fava, via Bertani 8, 46100 Mantova, Italy. [TNX IK2QPR and 425 DX News]

**9H, MALTA.** (6) Jose, EA5KW will be active from Gozo Island (EU-023) on the 12<sup>th</sup> until the 18<sup>th</sup> of August and has requested the call 9H3KW but still awaits official confirmation. Plans are to operate SSB, CW, RTTY and PSK31. QSL via home call. [TNX EA5KW and 425 DX News]

**FP, ST. PIERRE AND MIQUELON.** (7) Paul, K9OT and Peg, KB9LIE will operate from Miquelon (NA-032) over the 11<sup>th</sup> until the 19<sup>th</sup> of August as FP/K9OT and FP/KB9LIE. Activity will take place on all bands 80-6 metres on CW and SSB (160m will be attempted but no guarantees). The pair are on holiday so they will be using modest equipment and power, 100 watts to wire and vertical antennas. Emphasis will be placed on 30, 17, and 12 metres. They also plan to enter the North American QSO Party SSB Contest using the Green River Valley ARS club callsign FP/K9WM. QSL via the bureau to their homecalls, except FP/K9WM QSLs which go to NN9K. [TNX K9OT and OPDX]

**Va, BRUNEL.** (8) Dario, IT9SSI, Elvira, IV3FSG and Antonio, IZ8CCW will operate from Bandar Sri Begawan, Brunei (OC-088) over the 5<sup>th</sup> until the

11<sup>th</sup> of August after their trip to YB, Indonesia. They plan activity on all HF bands using SSB, CW, RTTY, PSK31 and possibly SSTV. The group have a web page at <http://www.mdx.org/v8a> [TNX IZ8CCW and 425 DX News]

## Special Events

**LY, LITHUANIA.** (9) Seven stations from Klaipeda, Lithuania will be on air using the LY750 prefix from the 5<sup>th</sup> of July until the 5<sup>th</sup> of August to celebrate the 750<sup>th</sup> anniversary of Klaipeda. The seven stations will be LY750TG (LY2TG), LY750BE (LY3BE), LY750EC (LY2EC), LY750FE (LY2FE), LY750CT (LY1CT), LY750PDA (LY2PDA) and LY750SV (LY2SV). QSL via P.O. Box 1000, Vilnius 2001, Lithuania or P.O. Box 70, Klaipeda 5800, Lithuania. There is a special award for working the LY750 stations, for further information please contact Eugene, LY3BE at [ly3be@mail.ru](mailto:ly3be@mail.ru) [TNX LY3BE and 425 DX News]

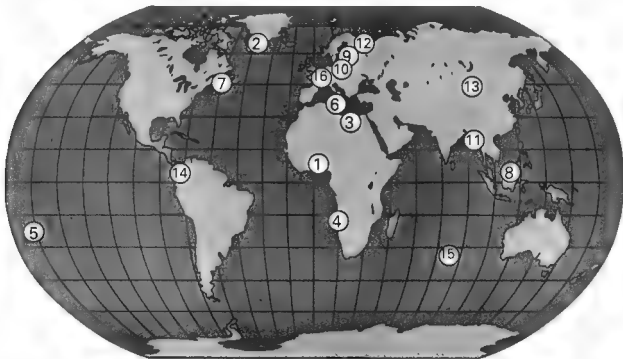
**SP, POLAND.** (10) The Prezes BGK, SP9PGB, will put to air the special event callsign SN150HZ (Sierra November One Five Zero Hotel Zulu) to celebrate the 150<sup>th</sup> birthday anniversary of Hugo Zapalowicz. Activity will take place using CW, SSB, RTTY, SSTV and PSK between the 15<sup>th</sup> of July and the 31<sup>st</sup> of August. Hugo Zapalowicz was a Polish explorer who championed the

preservation of nature, was the author of many natural science and geological papers and studied the family names from the region of the Babia Gora Mountains. He enjoyed climbing and highland folk customs. Babia Gora Mountain is 1725m high in Polish Carpatia Mountains. QSL via the Bureau to SP9PGB.

**Mike, GM4SUC,** wants to remind us that the **International Lighthouse/Lightship Weekend** will take place from 0001UTC Saturday the 17<sup>th</sup> until 2359 UTC Sunday the 18<sup>th</sup> of August. Already over 100 entries from 27 countries have been registered so far on the official web page run by VK2CE at <http://vk2ce.com/illw>. You don't necessarily need to be in a Lighthouse or lightship, simply being in the vicinity of a recognised maritime navigation installation will suffice, so join in for a weekend of radio and fun. This is definitely NOT a contest but a weekend to enjoy playing radio with your friends and meeting new people. If you have any questions or need to contact Mike for any reason at all he can be emailed at [gm4suc@compuserve.com](mailto:gm4suc@compuserve.com)

## DXpeditions

**XY, MYANMAR (BURMA).** (11) The DXpedition schedule has been finalised and now includes the dates, locations and activity: August 2-8<sup>th</sup> Yangon



[Rangoon], 80-10 metres, including WARC and 6m, using one station.

August 9-22<sup>nd</sup> Ngapai (near Thandwe on the Arakan coast), 160-10 metres, including WARC and 6m, using up to 4 stations.

August 16-19<sup>th</sup> Apaw-Ye Kyun, New IOTA (Arrakan Group) 80-10 metres, including WARC and 6m, using 2 stations minimum.

The callsigns to be used are XY3C (CW), XY3T (SSB) and XY7V (digital modes). QSL XY3C via DL4KQ, XY5T via IN3ZNR, XY7V via DL8KBJ, either direct or through the bureau. For further details visit the web page for the DXpedition at <http://www.dxpedition.de/mysanmar2000> [TNX IN3ZNR, 425 DX News and The Daily DX]

**MOUNTAIN POLAR DXPEDITION.** (12) Members of the Russian Robinson Club plan to be on air from the Khibiny Mountains in the Kola Peninsula (RM-0101 for the Russian Mountain Award) from the 9<sup>th</sup> until the 23<sup>rd</sup> of August as R3RRC/1. Activity will take place on HF and VHF (no other details).

**JT, MONGOLIA.** (13) Ken, K4ZW, is planning another trip to Mongolia this time to concentrate on 80 and 160 metre operations and Karl, K4YT, is planning to accompany him. The date for the trip is set for September, the exact dates will be released later. The two intend to erect beverage antennas and hope to be able to improve the ground system under the Titanex vertical that was installed last November at the QTH of JT1CO. Ken says he is willing to hand carry cards to Mongolia and is extremely confident he can get cards for QSO's with JT1CO, JT1BG and JT1BV and possibly others as well. Ken can be contacted at his callbook address (please include a SAE with an IRC or Greenstamp) or via Email at K4ZW@staffnet.com [TNX The Daily DX]

**HK0, COLOMBIA.** (14) Roberto, EA4DX, is expecting his licence and travel documents to be confirmed for his trip to Providencia Island, Colombia. If all goes well he will be departing for Bogota, Colombia on the 14<sup>th</sup> of August and will be on air as HK0/EA4DX on the 20<sup>th</sup>. Roberto plans to be operational until the 30<sup>th</sup> of August. Pilot stations have been assigned and are J6KVR for Japan and EA5BY and EA5FD for the rest of the world. QSL via EA4DX. [TNX EA4DX and The Daily DX]

## Round up

**FT/Z, AMSTERDAM ISLAND.** (15) Rumour are circulating that Caroline, F4DOT (a YL operator) is to travel to Amsterdam Island from Reunion Island on a fishing boat. If the rumours are correct, she may stay there until at least January, and possibly February 2003. This means that Caroline would be the first operator to operate from Amsterdam Island.

However, Caroline is a novice operator and expects only to operate on 6 metres. So if you manage a QSO please show some patience and help her all you can as her operating experience is rather limited. She will be using the call FT1Z, the first time this prefix has ever been on air. [TNX F4DOT and OPDX]

**TM, FRANCE.** (16) TM2CMM is to be the special French callsign for the Chateaufaud Radio Club special event station celebrating the world championship of hot air ballooning. The event is to be held over the period of the 18<sup>th</sup> of August until the 1<sup>st</sup> of September. QSL to F5KOK via bureau [TNX The Daily DX]

**RARE QSL CARDS WANTED.** Tom, K8CX and Maurice, F5NQL are looking for rare and interesting QSL cards to put on the online Ham Gallery. They already have an extensive display and are always on the lookout for additional cards from rare and exotic locations. Currently they are searching for cards from the following locations/periods;

F18 French Indochina (now Vietnam) before December 1950, 20<sup>th</sup>

FN8 French Indian settlements of Ponfichery, Chandernagor, Mahe, Yanaon and Karikal, (now VU), before October 1954, 31<sup>st</sup>.

They don't need the original QSL; a good photograph, photocopy or digital image (in BMP or JPG format) would gladly be accepted. Tom can be reached at [k8cx@hamgallery.com](mailto:k8cx@hamgallery.com) and Maurice, F5NQL at [f5nql@aol.com](mailto:f5nql@aol.com) or [maurice.f5nql@nomade.fr](mailto:maurice.f5nql@nomade.fr). The QSL card display can be found at <http://hamgallery.com/>

**Champ, XW1HC/E21EIC,** is a very busy amateur operator, making over a 1,000 QSOs each day. He can be found on 15, 17, 20 and 30 metres operating CW but comes up on SSB between 1500 and 0000 UTC.

He is using a TS-850 with 100 watts into a C3 and A4S. QSL via E21EIC. [TNX The Daily DX]

**HP, PANAMA.** Enrique, HP1IBF, says that Panamanian amateurs have been granted access to the 30 metre band again after some intense lobbying of the Government.

Enrique says "tenacious efforts of the Radio Club of Panama and of many individual amateurs" and "after lengthy discussions, debates and public hearings, Panama's amateurs convinced authorities to reconsider the value of amateur activity to the community - as well as the importance of having Panama's regulations conform to international conventions and agreements that it had already signed."

Take note VK hams, this just goes to show what can be achieved by a presenting a united front to a Government authority.

**The Philippine Amateur Radio Association (PARA)** is celebrating its 70<sup>th</sup> anniversary. As such, Philippine amateurs have been authorised to use the special prefixes of 4D70 (for individual stations) and DZ70 (for club stations) until the 31<sup>st</sup> of December 2003.

And now for something completely different (as they say in the classics!). This from an article in OPDX "INTERESTING OPERATION OF THE WEEK. Look for the "Nativist Amateur Radio Club's" station, NU5DE, to be active from 0000z, July 8th through 2400z, July 14th, from Austin, TX. Activity will take place during the 27<sup>th</sup> Annual North American Nude Awareness Celebration. Suggested frequencies are: 7265, 14265, 21365 and 28465. QSL via: Nativist Amateur Radio Club, P.O. Box 200812, Austin, TX 78720-0812. "I only hope they didn't get too excited in the 'pile-ups'!"

## Sources

As always, the details in this months edition of DX Notes have been collected from a number of individuals and organisations, all of who deserve our thanks for allowing it to be published in AR magazine.

This month our thanks go to KK5DO, AA5AU, G3TTE, VE2XG, DL2VFR, K4RB, IK2QPR, EA5KW, K9OT, IZ8CCW, LY3BE, SP9PCB, GM4SUC, IN3ZNR, K4ZW, F4DOT, TM2CMM, K8CX, E21EIC, HP1IBF, The Philippine Amateur Radio Association, The Russian Robinson Club, 425 DX News, OPDX and The Daily DX

## Ken Hanby VK4IS

The Queensland Sunshine Coast amateur radio fraternity and amateur radio in general will be the poorer for the loss of well-known identity Ken Hanby VK4IS. Ken passed away in Westmead Public Hospital, Sydney on 11 June 2002 after a period of diabetes caused complications.

Ken was born on 13 April 1923 at Methley Junction, Yorkshire, England. At about 16 years of age he joined the Home Guard and learned all about battle with a broomstick instead of a gun.

He enlisted in the British Army when Pearl Harbour was raided in 1942, and served during World War II as a radio operator in the Middle East and Europe.

Leaving the army as a sergeant in 1947, Ken came to Melbourne working initially as a motor trimmer, and later with his brother Ray took over the family soft furnishing business *Hanby Interiors* at Frankston.

Ken married Edna in 1957 and in 1965 he became a father to Karen and her brother Marc who were left with Ken and Edna to raise.

Ken retired from business in the early 1970s and in 1977 was diagnosed as diabetic. He spent many holidays in Queensland and in 1986 bought a unit at Caloundra.

He joined the Sunshine Coast Amateur Radio Club, upgraded his qualifications to AOCF and became a Wireless Institute accredited examiner. A keen amateur with an abiding interest in many facets of the hobby, Ken was elected club president in 1990, a position he held for four years.

Although of limited mobility, Ken led by example: he attended the many JOTA camps; he participated in the field during John Moyle Contests until his movements became restricted when he operated portable after lugging a car battery to the roof of his apartment block; he took part in fox hunts; and his solo efforts in the RedSun Rally can only be commended.

He rostered volunteers to broadcast Morse practice sessions on Sunday night and on 9 July 1993 instituted the Sunshine Coast Amateur Radio Club

'Good Morning Net'. The Morse broadcasts and Good Morning Net are ongoing.

On 16 April 1994 Ken was presented with the Wireless Institute of Australia Queensland, Distinguished Service Award, for his service to the Sunshine Coast Amateur Radio Club and amateur radio in general.

Edna who was in a nursing home in Caloundra for some years passed away in September 2000. In August 2001 Ken returned to Melbourne to seek treatment for his advancing medical condition and was immediately hospitalised. He was subsequently 'kidnapped' by Karen who cared for him in Sydney until he became silent key.

A big man in the lives of family members, Ken is survived by Karen and Marc, their extended families, and relatives in Australia and England.

Sadly missed by his many amateur radio friends and all who knew him, vale Ken.

Ron VK4GZ

## Club News

### O.R.A.R.C. - Port Macquarie NSW

The Oxley Region Amateur Radio Club held its AGM on August 3. The retiring President, Bruce Walker, VK2HOT, gave an excellent report on the past year with the Club's participation in numerous events that included the R.D. and John Moyle Contests.

Other activities included JOTA, Lighthouse on-air event and participation in a local event known as the Gray Madri Gras. A great opportunity to show off Amateur Radio to the locals. Attendance to the annual Port Macquarie Field Day held every year over the Queens Birthday weekend was slightly down on previous years, however the Fox-hunt participation was as strong as ever.

The clubrooms received a new computer and HF rig as well as new antenna's being installed. The Middle Brother VHF Repeater on 146.7 MHz has been in great shape over the year thanks to supervision by VK2TT. Unfortunately the VK2RCN Repeater on 147.0 MHz is still off air.

Alan Nutt, VK2GD, was installed as the President for the ensuing year.

The ORARC meets on the first Saturday of each month at 2 pm at the SES Building, Port Macquarie. For more information call 02 6582 3557 or email [anutt@ozemail.com.au](mailto:anutt@ozemail.com.au) (de VK2AYD)

## ONE-TECH 02

The ACT Division is to sponsor a technical symposium

**"One Tech '02"**

**on Sunday, November 17, 2002.**

Packed with technical subjects of interest to Radio Amateurs, there will be also be presentations from Government, Industry, and Universities on radio and electronic subjects.

All presentations will be limited to 40 minutes.

Two streams of presentations will allow attendees to choose their preferred subject.

A heart-friendly lunch is included. Family members can attend just for the lunch, and also enjoy other activities that Canberra has to offer.

For more information, visit the Division's Website at:

**[WWW.VK1.WIA.AMPR.ORG](http://WWW.VK1.WIA.AMPR.ORG)**

or contact the convener, Peter Ellis (VK1KEP) at

**[PUBLCITY@VK1.WIA.AMPR.ORG](mailto:PUBLCITY@VK1.WIA.AMPR.ORG)**

or WIA ACT Division,

P.O. Box 600, Canberra City, ACT, 2601.

# Oscar-7 is back after 22 years of silence

## A Most Remarkable Happening

It was on Friday 21<sup>st</sup> June that Pat Gowen G3IOR came up with some startling news. He had monitored a transmission that appeared to be coming from the long lost amateur radio satellite AO-7.

Had it not been for Pat's impeccable reputation among the AMSAT community this 'news' would have been treated with some skepticism - but as it turned out - many people began to confirm his observation and it seemed the impossible had happened. AMSAT-Oscar-7 had begun transmitting Morse code telemetry on its familiar old frequency of 2 metres.

Over the next few days there must have been hundreds - if not thousands - of antennas pointed in its direction and it was soon discovered that the transponders were also working. Within a few orbits it was obvious to all that AO-7 was only appearing when lit by the Sun. Just a few days later as the contact tally mounted, the Atlantic Ocean was spanned once again via AO-7 for the first time in almost 22 years.

Even more remarkable is the fact that Pat Gowen who "re-discovered" AO-7 was one of those who originally worked on its construction. Old-timer gurus and original builders of AO-7 like Jan King and Tom Clark came to light with possible reasons for its re-appearance.

AO-7 was launched and commissioned in November 1974. It really was an "amateur radio" satellite. Its component units were designed and built in home workshops by radio amateurs from many countries and it was assembled in Jan King's basement radio shack by such AMSAT notables as Jan, Tom Clark, Karl Meinzer, Werner Haas and others.

This was real amateur radio. No computers. No clean rooms or space qualified components, just good old fashioned know-how. And it worked! I remember it as a stalwart of our early Mt Skene expeditions in the mid to late 1970s. It was to serve the amateur radio satellite community for 6 years until one

by one its NiCad cells short circuited and eventually it went silent in early 1981.

The consensus of opinion supports the belief that at least one of the cells has somehow 'un-short-circuited' itself allowing power from the solar panels to reach the electronics. Remarkably most of the electronics still work after nearly 30 years orbiting in the harsh space environment. When both AO-6 and its successor AO-7 failed early due to battery trouble, AMSAT pioneer Larry Kayser, VA3LK devised a method of matching NiCad cells.

The longevity of subsequent satellites using such 'matched' cells has proven beyond doubt the success of Larry's method. The University of Surrey's UOSAT-2 (UO-11) was equipped with ordinary commercial cells which were selected and matched using Larry's method and it's record speaks for itself. It is still operational after 75000 orbits and 18 years of reliable operation.

AO-7 had modes A and B linear transponders that switched modes with a timer. The high orbit of 1400+ kilometres gave it the largest coverage of any amateur satellite up to that time. All of Australia and New Zealand could fit into its huge footprint making ZL to VK6 satellite contacts a possibility for the first time and contacts with the islands to our north became commonplace.

Pass times of 20 - 25 minutes made reg-chewing the order of the day on AO-7 and the Doppler shift was easy to deal with, even using mode-B. This was because AO-7 gave us our first taste of an inverting transponder, a concept which went on to become the standard for all VHF-UHF Oscars to come.

Much of the operating etiquette still in use today was developed on AO-7. Modes A and B gear became mandatory on our annual mountain-topping operations during the years from 1975 to 1980. It was sad to say good bye to our old friend AO-7 but when it finally went silent it had already been succeeded by AO-8. Shortly afterwards

the really high altitude AO-10 took over as our satellite of choice in 1983.

But we all had a soft spot for "seven" as it was known, never suspecting it would make an unscheduled return to the airwaves in 2002. Keplerian elements are available from the usual sources and the operating frequencies are as follows:

### Two to ten metre linear transponder.

Input 145.850 to 145.950 MHz  
Output 29.40 to 29.50 MHz

### Seventy cm to two metre transponder.

Input 432-125 to 432-175 MHz  
Output 145.975 to 145.925 MHz  
Output passband is INVERTED.  
Beacons — 29.502 MHz — 145.975 MHz — 435.1 MHz — 2304.1 MHz

### Operating Modes:

Mode A. — 2 to 10 metre - when this transponder is on, the 29.502 MHz beacon sends 20wpm Morse code telemetry.

Mode B. — 70 cm to 2 metre - when this transponder is on, the 145.975 MHz beacon sends 20wpm Morse code telemetry.

Although the 850 Hz FSK teletype beacon has been heard, it is not transmitting meaningful data. A search is on as I write this to see if anyone can hear the 2304.1 MHz beacon.

Speculation has now surfaced as to whether any other long defunct bird may start transmitting again. If AO-7 can do it - why not AO-8 or perhaps even AO-6. Maybe we should be doing a SETI-like search of the beacon frequencies of all the old amateur radio satellites.

If Pat G3IOR hadn't listened we still may not know that AO-7 is on the air. Do have a listen to AO-7, even if only for old times sake.

**Oscar 7** — born 15/11/1974 Lomboc Calif. Octahedral, 360mm tall, 424mm across. Three mode. Previous last noted contact 1981.



# ISS Active Again on Packet and Voice

## Recent American field-day activity sparks an increase in amateur radio activity on ISS.

Apart from the many scheduled school contacts, general AR activity on ISS had been sparse.

The field day however seemed to liven things up quite a bit and it should be worth the effort to keep a watch on the ISS packet radio and voice frequencies. Many voice contacts have been reported over the past few weeks and the packet equipment appears to be running almost continuously.

General information regarding amateur radio activity on board ISS can be found at the following NASA web-site:

<http://spaceflight.nasa.gov/station/reference/radio/>

In planning your listening schedule consult the ISS daily crew schedule which gives an idea when crew members have free time and may be available for

Amateur Radio operations. This information is available at <http://spaceflight.nasa.gov/station/timelines/>

In a more general sense a detailed breakdown of the amateur radio antenna installation on ISS with some excellent pictures and diagrams are available at:

<http://arise.gsfc.nasa.gov/EVA/amsat01.pdf>

## A Couple of Hardy Annuals

### Oh no ... not the old "Repeater-on-the-moon" question again!

Every now and then the question of putting an amateur radio package of some sort on the moon comes up on the Amsat bulletin board.

Just a few weeks ago it appeared again and as usual it spawned a bunch of replies some supporting and some ridiculing the idea.

James Miller G3RUH wrote an excellent piece on this topic in Amsat-UK's "Oscar-News" some years ago. It's available on their web-site if you want a good read. It's titled "The Earth Moved".

Broadly it boils down to this. The idea has been proposed and even got as far as space being reserved for the package under the driver's seat on a lunar rover vehicle on one of the late manned moon missions. But there are problems, big problems. When you work out the link budget it turns out that if the signal is to

be available to modestly equipped amateur radio earth-stations then the moon installation would need either/ both a lot of power and/or a very high gain antenna system.

Any high power installation on the moon would be fraught with difficulty as its batteries would need to withstand alternate roasting and freezing temperatures during the 14 day long moon-day and moon-night. Keeping the batteries charged and in good order would be a mammoth task.

As if that's not enough, a high gain antenna would need to be steered to follow the Earth due to the moon's libration which causes the Earth to describe little figure-of-eight patterns in the moon-sky. The problems associated with designing, building and somehow ensuring the longevity of any

mechanical tracking apparatus just don't bear thinking about.

Sure the job may possibly be done with electronically steerable phased arrays, but once again no easy job. Such a high gain antenna would be essential to receive signals from low powered amateur radio stations on Earth.

After all those points have been addressed you then have to organise a launch and soft landing on the moon. My advice to those who are pushing for Amsat to consider such a system is "Don't hold your breath".



### And while we are out there...

The second question that comes up from time to time is "Why don't we get some astronomers to photograph our satellites in orbit for trouble-shooting purposes."

This question is usually triggered by some photographs appearing somewhere on the world-wide-web of ISS or old pictures of MIR taken from the ground. The questioners should note just how much smaller our satellites are than ISS.

The web pictures are usually taken by very advanced amateur astronomers or professionals using large telescopes. Even the best of the best amateur installations can only get fuzzy pictures of objects as large as ISS. Their best effort to photograph even our largest satellite

(AO-40) wouldn't be good enough to get anything more than a tiny fuzzy blob on their CCD cameras. This might be interesting but hardly good enough to be of any practical use to someone trying to fathom a problem like was Oscar-10 struck a glancing blow by the rocket casing on separation?

So, what about asking professional astronomers with really big telescopes to have a look. Telescopes like Kitt Peak and Mt Palomar are booked up for years in advance on research projects. Besides - their tracking mechanisms are designed to follow slow moving objects like planets and stars, not fast moving satellites.

Once again, anything is possible but - don't hold your breath.

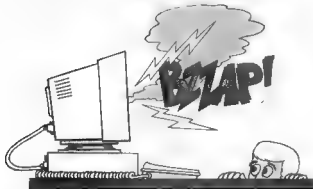
## The AMSAT group in Australia.

The National Co-ordinator of AMSAT-VK is Graham Ratcliff VK5AGR. No formal application is necessary for membership and no membership fees apply. Graham maintains an email mailing list for breaking news and such things as software releases. Members use the AMSAT-Australia HF net as a forum.

### AMSAT-Australia HF net.

The net meets formally on the second Sunday evening of the month. In winter (end of March until the end of October) the net meets on 3.685 MHz at 1000UTC with early check-ins at 0945UTC. In summer (end of October until end of March) the net meets on 7.068 MHz at 0900UTC with early check-ins at 0845UTC. All communication regarding AMSAT-Australia matters can be addressed to: AMSAT-VK, GPO Box 2141, Adelaide, SA. 5001. Graham's email address is: [vk5agr@amsat.org](mailto:vk5agr@amsat.org)

# HDD Crash



It happens to all computer users at some time and often more than once, the dreaded hard disk crash.

Such a failure of a hard disk can really mess up your day, or should I say in reality, several days.

My PII 266 is used mainly for internet, word processing and graphics, and for several months had the odd problem booting (starting up), with reports of a missing or corrupted file from time to time on boot up. The problem was solved by re booting. As the problem was only a minor inconvenience it was ignored.

However one evening the blue screen of death (major software or hardware problem) came up with the message "unable to write to drive C". Now this did not look good, but hitting the enter key took the computer back to normal operation and it was possible to write to the hard drive.

However the long and short of it was the "unable to write to drive C" continued to come up from time to time and a scan of the C drive showed all was not well, with a couple of bad sectors, and worst of all, Scandisk (the program that tests the read write performance of the hard disk) would crash. Eventually on start up the computer would not even recognise the hard disk at BIOS level (basic input output system).

For the non-computer reader, a computer has a basic program (BIOS) on the motherboard that among several other things recognises hardware such as hard drives. The hard drive would work from time to time but there was little point in delaying the inevitable, a new hard drive was needed.

Having learnt the lesson about backing up no data was lost but buying a replacement hard drive and reloading all the drivers and software followed by setting up the Internet etc is a lengthy process. Time spent in the past getting all the software together in one place was time well spent, so a hard disk was purchased and installed with a minor hitch of being told that a 40 gigabyte hard disk would work in a PII 266. It would not, as computers of this age usually only recognise hard disks smaller than 32-gigabyte. So another trip to get the right hard drive. All went well and the computer is back working.

Hard disk prices sure have come down in price per gigabyte. I remember not so long ago a one gigabyte hard drive costing \$1,000! Ten years on they are about \$5 per gigabyte.

This is my excuse for having little time to write much for this month's column. A total of three days on and off was spent returning the computer back to use. I had also backed up my e-mail address book so little drama there.

## Windows XP

I have had the opportunity to have a play with Windows XP and a couple of observations. When setting up a computer from

scratch, Windows XP can do the complete job without the need for any driver disks.

Windows XP contains a large selection of drivers and just goes right through without asking for anything.

When Windows XP does not have a particular driver and asks for a driver disk, as soon as you put the CD or floppy in, it goes to the disk and scans it for the driver and then loads it. This is a great improvement in manually sorting through confusing directories to find the right driver.

## Radio Circuits

While looking at the VK6WIA web page I found a link to circuits of many amateur radio transceivers.

Have a look at [http://hamradio.online.ru/sch\\_eng.html](http://hamradio.online.ru/sch_eng.html)



## Contest Calendar

### August – October, 2002

Aug	3	Waitakere Sprint	(CW)	
Aug	3	European HF Championship	(CW/SSB)	
Aug	4	YO DX Contest	(CW/SSB)	
Aug	10/11	Worked All Europe DX Contest	(CW)	
Aug	17	SARTG WW RTTY Contest	(RTTY)	
Aug	17/18	Keymen's Club of Japan Contest	(CW)	
Aug	17/18	SEANET Contest	(All)	(Jul 02)
Aug	17/18	Remembrance Day Contest	(CW/SSB)	(Jun 02)
Aug	24/25	SCC RTTY Championship	(RTTY)	
Aug	24/25	TOEC WW GRID Contest		
Aug	24/25	ALARA Contest	(CW/SSB)	(Jul 02)
Sep	7	Digital Modes Contest	(PSK31 etc)	(Jul 02)
Sep	7/8	All Asian DX Contest	(SSB)	
Sep	14/15	Worked All Europe DX Contest	(SSB)	
Sep	21/22	Scandinavian Activity Contest	(CW)	
Sep	28/29	Scandinavian Activity Contest	(SSB)	
Sep	28/29	CQ/RJ WW RTTY Contest	(RTTY)	
Sep	28/29	Anatolian DX Contest	(SSB)	
Oct	5/6	Oceania DX Contest	(SSB)	(Aug 02)
Oct	6	RSGB 21/28 MHz Contest	(SSB)	
Oct	10	Ten-Ten Intl. Day Sprint	(All)	
Oct	12/13	Oceania DX Contest	(CW)	(Aug 02)
Oct	19/20	JARTS WW RTTY Contest	(RTTY)	
Oct	20	Asia-Pacific Sprint	(CW)	
Oct	20	RSGB 21/28 MHz Contest	(CW)	
Oct	28/27	CQ WW DX Contest	(SSB)	

## Greetings to all readers....

This month I must warn you **don't trust 'em**.

On previous occasions I have suggested that you take every care in checking your log before sending it off to the Contest Manager.

I can report that if ever a lesson needed to be learned, this is it and I am the bunny who should learn it.

As I was preparing these notes I had an email from the Manager of the Oceania DX Contest to say that the 2001 results were almost complete, but that MY log had no scores attached. This puzzled me, as it was the first time I had used my logger to convert to the new Cabrillo format. I found the printed results rather confusing to read, but it LOOKED OK, so off it went.

August is a month of several VK

contests, so as well as urging you to get involved, I also urge that you check very carefully your final log.

On the subject of Cabrillo, this seems to be the new standard for log submission. Initiated by the ARRL, it is an easy system for computers to read and therefore to cross-check from one log to another.

Many contests are now checked this way – in fact the Oceania DX Contest is now done fully in Cabrillo format.

This means that EVERY log must be converted to Cabrillo by a team of

willing volunteers, and this is a very big task in its own right. After this the logs are run through checking tools, and the outcome is either a string of anomalies caused by the typing process, or finally the results.

For this reason I urge you all to equip yourselves with a logger capable of producing Cabrillo files, but not to forget to check the output even so. I find it best now to submit all logs in the Cabrillo format and leave the handling to the Contest Manager.

73 and good contesting, Ian Goddall VK3VP

## Results CQ WW WPX CW Contest 2001

(VK/ZL only - Call/bandscore)

VK8AV	All	735,768
VK5GN	"	666,250
VK4DX	"	1,622,264
VK2DPD	"	308,550
VK4TT	28	342,236
VK3VP	All	2,639
	QRP/section	
ZL3CW	"	745,108
ZL1AH	28	116,754
ZL1TM	7	110,464
ZL6QH	All	5,701,696
	Multi-multi section	

## Results IOTA 2002

(VKs only - Call/score/section)

VK2CZ	72,540	Multi-op.	
VK4TT	14,985	12-hours	CW
VK6NU	85,500	12-hours	SSB
VK3MMY	30,360	"	"
VK1JD	29,484	"	"

## Results Harry Angel Sprint 2002

From Ian Godsil VK3VP,  
Contest Manager

**CW: Place/callscore**

1 <sup>st</sup>	VK5NJ	50 points
2 <sup>nd</sup>	VK4BUI	18 points

**SSB: Place/callscore**

1 <sup>st</sup>	VK5SR	27 points
2 <sup>nd</sup>	VK2JAH	26 points
3 <sup>rd</sup>	VK2LCD	16 points
4 <sup>th</sup>	VK3ABP	8 points
	VK2EJK	8 points
6 <sup>th</sup>	VK4NPF	7 points

**MIXED: Place/callscore**

1 <sup>st</sup>	VK2AYD	41 points
2 <sup>nd</sup>	VK8AV2	3 points
3 <sup>rd</sup>	VK1AI	21 points
4 <sup>th</sup>	VK4EV	18 points
5 <sup>th</sup>	VK4VP	13 points

**Comments:** Many thanks indeed to those who took part and sent their logs. As you can see, not a large number, but again several stations that took part did not send logs. Please reconsider this strategy for future events. We need your entry!!

I am very happy to see several regular contesters in the above list, as well as some whose call signs are unknown to me. Thank you all very much indeed and I hope that we shall see you in future VK events.

I understand that the certificates for the 2001 event were never issued, so please be assured that this will be dealt with - hopefully by the time that you read these notes

Again, many thanks and see you in the next VK contest.

Ian Godsil VK3VP

## Contest results

### VK/ trans Tasman Contest - Complete Results

#### Overall Winner

(VK/ trans-Tasman Trophy):

VK7KHZ (Thomas Lynd, aged 10, - 2<sup>nd</sup> Operator under supervision of licensee, Bill Lynd).



#### Category 1 (Phone):

Place	Call	Score
1 <sup>st</sup>	VK7KHZ Thomas Lynd	2192
2 <sup>nd</sup>	VK2AKJ Jim Patrick	2164
= 3 <sup>rd</sup>	ZL4AL Club Station Gerry Christie, Neil Gilder, John Graham	2148
= 3 <sup>rd</sup>	VK3IO score Ron Tremayne	2043
5	ZL4DX	1972
6	ZL2KO	1954
7	ZL2AUB	1954
8	VK2AYD	1832
9	VK3BHG	1816
10	ZL1BYZ	1557
11	VK2QV	1364
12	ZL3REX	1262
13	ZL1WT	1218
14	VK2JAH	1196
15	VK7VH	1174
16	VK2LCD	1171

17	VK3BTV	1130
18	ZL4AS	1025
19	VK7NDO/Q	1001
20	ZL1ALZ	790
21	ZL1PZ	781
22	ZL2CAT	702
23	VK3LCM	692
24	VK5EMI	664
25	VK2JDC	643
26	VK6XT	491
27	VK2IGS	477
28	VK2LEE	423
29	ZL2ACJ	359
30	ZL1AAS	310
31	VK3JWZ	298 (ineligible)
32	VK3FN	235
33	VK5KMC	205
34	VK3YB/Q	205
35	VK3HV/Q	198
36	VK2AFU/Q	172
37	VK4FNQ	172
38	ZL1IE	161
39	VK3DBQ	146
40	ZL3DW	113
41	VK2BQS	104
42	VK3MGZ	101
43	VK6ADI	85
44	VK5ET	68
45	ZL1TW	56
46	VK6KI	21
47	VK4HQ	12
48	VK2JWA	6

#### Category 2a (Phone/QRP):

Place	Call	Score
1 <sup>st</sup>	VK7NDO David O'Brien	1001
2 <sup>nd</sup>	VK3FN Tony Bland	235
3 <sup>rd</sup>	VK3HV George Francis	198
	VK2AFL	172

#### Category 2b (CW/QRP):

Place	Call	Score
1 <sup>st</sup>	VK3JS Ian Godsil	734
2 <sup>nd</sup>	ZL2AVL Bill Luscombe	571
3 <sup>rd</sup>	VK5BLS Barry Samuel	281
	VK2KET	268
	VK2AVQ	186

#### Category 3 (Single Operator - CW):

Place	Call	Score
1 <sup>st</sup>	VK3JS Ian Godsil	734
2 <sup>nd</sup>	ZL2AVL Bill Luscombe	571
3 <sup>rd</sup>	VK2AYD David Pilley	428
	VK3BTT	390
	VK3MV	378
	VK5BLS	281
	ZL1PZ (check Log only)	240
	VK3XU	237
	ZL1TW (check Log only)	177
	ZL3REX	142
	VK4XY	163
	ZL1ALZ	81
	ZL2ACJ	79
	VK5ET	36
	VK8HA	0
* 1 <sup>st</sup>	VK-VK7KHZ Thomas Lynd	2192
* 1 <sup>st</sup>	ZL-ZL4AL Club Station	2148

\* Night Owl's Bucket-mouth Award"  
(Highest Phone score in last hour): 517  
ZL4AS Club Station

\* Night-Owl's Paddle-pumper Award"  
(Highest CW score in last hour): 68 VK3JS  
Ian Godsil

\* Lowest Scoring Log Award. 0 VK8HA  
Henry Anderson

# The 2002 Oceania DX Contest Oct—5/6

## 1. SPECIAL NOTES for the 2002 Contest

- While paper logging is acceptable it is easier for the contest committee to get the results out quickly if electronic logging is used—especially for logs containing more than 50 contacts.
- Electronic logs are preferred in the Cabrillo format, which is generated by most of the popular contest logging software. If Cabrillo is not used then the log and summary sheet must be in plain ASCII text format.
- Single-Op Single Band logs are to record ALL contacts made by the station—both on the band chosen for the entry and on any other bands. (2002 rule change)
- 7 new plaques/trophies are available for the 2002 contest
- The start time has been brought forward to 0800 UTC (2001 rule change)
- Further information on the contest is available from the Oceania DX Contest web site at [www.nzart.org.nz/nzart/update/contests/oceania/](http://www.nzart.org.nz/nzart/update/contests/oceania/)

## 2. THE AIM of the contest is to promote HF contacts with stations in the Oceania region (VK, ZL, Pacific Islands and other locations within the IARU "Worked All Continents" Oceania boundary).

## 3. CONTEST PERIODS:

PHONE Contest: 0800 UTC Saturday 5 October to  
0800 UTC Sunday 6 October  
CW Contest: 0800 UTC Saturday 12 October to  
0800 UTC Sunday 13 October

## 4. THE OBJECT is for

- Oceania transmitting stations to contact as many stations as possible both inside and outside the Oceania region.
- Non-Oceania transmitting stations to contact as many stations as possible inside the Oceania region. Contacts from "one non-Oceania to another non-Oceania" station are NOT permitted.
- Oceania receiving (SWL) stations to hear as many stations as possible both inside and outside the Oceania region.
- Non-Oceania receiving (SWL) stations to hear as many stations as possible inside the Oceania region. Logging of non-Oceania stations is NOT permitted.

## 5. BANDS: 160 m—10 m (no WARC bands).

## 6. ENTRY CATEGORIES:

- **Single-Op**—Single Operator, All Bands or Single Band. Single operator stations are where one person performs all operating, logging and spotting functions. Only one transmitted signal is allowed at any time.
- **Multi-One**—Multiple Operator, Single Transmitter, All Bands. Only one transmitter and one band permitted during the same time period (defined as 10 minutes). Exception: One—and only one—other band may be used during any 10-minute period if—and only if—the station worked is a new multiplier. Logs found in violation of the 10-minute rule will be reclassified as Multi-Multi. Use a separate serial number for the multiplier station. All operation must take place from the same operating site.
- **Multi-Multi**—Multiple Operator, Multiple Transmitter, All Bands. No limit to transmitters, but only one signal and running station allowed per band. Use separate serial numbers for each band. Note: All transmitters and receivers must be located within a 500 metre diameter area or within property limits of the station licensee, whichever is greater. All operation must take place from the same operating site.

- **SWL**—Short Wave Listener (Receive Only) All Bands. The same callsign for the "station being worked" must not appear more than once in any group of 3 consecutive log entries.

## 7. EXCHANGE: RS(T) report plus a three or four digit number starting at 001 and incrementing by one for each contact. Multi-One entries are to use a separate serial number for the Multiplier station. Multi-Multi entries are to use a separate serial number for each band.

## 8. MULTIPLIER: The multiplier is the number of different prefixes worked. Note that the same prefix may be counted once on each band for multiplier credit.

A prefix is the letter/numeral combination that forms the first part of the amateur call—the same as the CQ WPX contest definition.

Examples of valid prefixes are N8, W8, WD8, HG1, HG19, KC2, OE2, OE25, etc. Any difference in the numbering, lettering, or order of the same shall constitute a separate prefix. A station operating from a DXCC country different from that indicated by its callsign is required to sign portable. The portable prefix must be an authorized prefix of the country/call area of operation. In cases of portable operation, the portable designator will then become the prefix.

Example: N8BJQ operating from Wake Island would sign N8BJQ/KH9 or N8BJQ/NH9. KH9XXX operating from Ohio must use an authorized prefix for the U.S. 8th district (W8, K8, etc.) Portable designators without numbers will be assigned a zero (0) after the second letter of the portable designator to form the prefix. Example: N8BJQ/PA would become PA0. All calls without numbers will be assigned a zero (0) after the first two letters to form the prefix. Example: XEFTJW would count as XE02. Maritime mobile, mobile, /A, /E, /J, /P, or interim license class identifiers do not count as prefixes.

Special event, commemorative, and other unique prefix stations are encouraged to participate. Prefixes must be assigned by the licensing authority of the country of operation.

## 9. CONTACT POINTS: All entries score twenty points per contact on 160 m; ten points on 80 m; five points on 40 m; one point on 20 m; two points on 15 m; and three points on 10 m.

Note that the same station may only be counted once on each band for contact points credit.

## 10. THE FINAL SCORE is the sum of the sum of the contact points multiplied by the multiplier (total number of prefixes worked), i.e., sum of contact points from all bands multiplied by the total number of prefixes worked on all bands (remember that the same prefix can be counted once on each band).

## 11. GENERAL LOG REQUIREMENTS. Transmitting entries are to submit a log showing the following details for each contact—date, time in UTC, callsign of station worked, RS(T) and serial number sent, RS(T) and serial number received.

SWL entries are to submit a log showing the following details for each contact—date, time in UTC, callsign of "station heard", callsign of "station being worked", RS(T) and serial number sent by the heard station. Note that the same callsign may appear only once in any group of 3 consecutive entries in the "station being worked" column.

All logs must be submitted in date/time order—except for Multi-Multi logs which may be grouped by band and then in date/time order.

Single-Op Single Band logs are to record ALL contacts made by the station—both on the band chosen for the entry and on any other bands.

**12. ELECTRONIC LOGS** are preferred—especially for logs containing more than 50 contacts.

Electronic logs should, where possible, be submitted in the **Cabrillo** format. The Cabrillo log file must include both an accurately completed header (containing the summary information) and the QSO log data. All of the fields in the Cabrillo header must be completed except for the ARRL Section, Power, Category Overlay and Soapbox lines. See the Oceania DX Contest web site at [www.nzart.org.nz/nzart/update/contests/oceania/](http://www.nzart.org.nz/nzart/update/contests/oceania/) for more information about the Cabrillo format requirements.

If you cannot submit a Cabrillo log, then you may submit the plain ASCII text output from most of the popular logging software such as TR, CT, NA, Writelog etc. All non-Cabrillo logs must be accompanied by a separate summary file in plain ASCII text—following the requirements for paper log summary sheets in Section 13 below.

Note that all electronic log files must be in plain ASCII text. Output files from word processors (such as Word documents), database programs (such as Excel spread sheets) or logging program .bin files that are not ASCII text files are NOT acceptable for submissions. Log information in columns is to be separated by character spaces—do not use Tabs or other formatting characters for this purpose.

File names are to include the call sign used during the contest and an appropriate file extension—e.g., ZL2WB submits a Cabrillo file—it should be named ZL2WB.LOG.

The files are to be submitted as an e-mail attachment or posted on a 3.5" diskette. Only one entry is to be included in each submission.

Files sent via e-mail must be sent as attachments, not as the text of the e-mail. Send the files to [phocetst@nzart.org.nz](mailto:phocetst@nzart.org.nz) (for PHONE entries) or [cwocetst@nzart.org.nz](mailto:cwocetst@nzart.org.nz) (for CW entries).

Do NOT zip files. The E-mail message subject line must include the entry's call sign, Mode (CW or PHONE), entry category and the word "OCEANIA" in the Subject line.

Diskettes are to be posted to: Oceania DX Contest, c/o Wellington Amateur Radio Club Inc., PO Box 6464, Wellington 6030, New Zealand with the entry's call sign, Mode (CW or PHONE), entry category and the word "OCEANIA" clearly marked on the front of the package. All diskettes submitted become property of the Oceania DX Contest Committee and are not returnable.

**13. PAPER LOGS:** Electronic Logs are preferred (as per the requirements in 12 above) but if this is not possible then paper logs in the following format are acceptable.

Paper logs are to include additional columns showing the contact points and new multiplier prefixes claimed against individual contacts. Multiplier prefixes should only be shown for the FIRST TIME that they are worked on each band. Duplicate contacts must be clearly shown—DO NOT delete duplicate contacts.

Furthermore each paper log is to be accompanied by an alpha/numeric checklist of claimed multiplier prefixes worked on each band plus a summary sheet that clearly states

- The station's call sign
- Operator name/s and call sign/s
- Entrant's name and mailing address
- Mode and Category entered
- Contact points claimed on each band
- Number of multiplier prefixes claimed on each band
- Total claimed score
- A declaration that all contest rules and radio regulations have been observed.

Official log sheets and summary can be downloaded from the

Oceania DX Contest web site at [www.nzart.org.nz/nzart/update/contests/oceania/](http://www.nzart.org.nz/nzart/update/contests/oceania/) or obtained by sending a "Self Addressed and Stamped Envelope" to the address below with sufficient postage. If official forms are not available then you may make your own in accordance with the general requirements outlined above and in Section 11.

Paper logs are to be posted to: Oceania DX Contest, c/o Wellington Amateur Radio Club Inc., PO Box 6464, Wellington, 6030, New Zealand. Only one entry is to be included in each submission. Airmail is preferred if you are submitting a log from outside VK or ZL.

**14. DEADLINE**—All logs must be emailed or postmarked NO LATER than 25 November 2002. The reception of logs will be confirmed via email (for electronic submissions) and a listing of all logs received will be posted on the Oceania DX Contest web site at [www.nzart.org.nz/nzart/update/contests/oceania/](http://www.nzart.org.nz/nzart/update/contests/oceania/).

**15. AWARDS**

Certificates will be awarded to the top scoring station in each category listed under Section 6 for each IARU WAC continent and each country.

The following trophies and plaques will also be awarded  
**OCEANIA**

- Top entrant from Oceania in Single Operator All Band Phone category—Ron Wills, ZL2TT Memorial trophy sponsored by ZL2CI, ZL2AL, Wellington Amateur Radio Club and NZART.
- Top entrant from Oceania in Single Operator All Band CW category—Frank Hine, VK2QL Memorial trophy sponsored by WIA Federal.
- Top entrant from VK5 or VK8 Call areas in Single Operator All Band Phone category—Plaque sponsored by WIA South Australian Division
- Top entrant from VK5 or VK8 Call area in Single Operator All Band CW category—Plaque sponsored by WIA South Australian Division
- Top entrant from VK7 Call area in Single Operator All Band Phone category—Plaque sponsored by WIA Tasmanian Division
- Top entrant from VK7 Call area in Single Operator All Band CW category—Plaque sponsored by WIA Tasmanian Division

**ASIA**

- Top Entrant from Asia in Single Operator All Band Phone category—Plaque sponsored by Australia Eastern Mountain and Districts Radio Club
- Top Entrant from Asia for Single Operator All Band CW category—Plaque sponsored by Australia Eastern Mountain and Districts Radio Club

**SOUTH AMERICA**

- Top Entrant from North America in Single Operator All Band Phone category—Plaque sponsored by N6RO
- Additional awards may also be applied at the discretion of the Contest Committee.

**16. DISQUALIFICATION:** Violation of the contest rules, unsporting conduct, taking credit for excessive duplicate contacts, unverifiable contacts or multipliers will be deemed sufficient cause for disqualification. The use of non-amateur radio means such as telephones or email, or the use of packet, to solicit contacts during the contest is unsporting and the entry may be subject to disqualification. In matters of dispute, the actions and decisions of the Contest Committee are final.

**17. FURTHER INFORMATION:** The latest information about the contest will be published on the Oceania DX Contest Web site at

[www.nzart.org.nz/nzart/update/contests/oceania/](http://www.nzart.org.nz/nzart/update/contests/oceania/).

# W.I.A. DXCC standings (335) (June 30 2002)

Call sign	Countries	Call sign	Countries	Call sign	Countries	Call sign	Countries
<b>HONOUR ROLL (326) PHONE</b>				<b>GENERAL LISTING - OPEN</b>			
VK4LC	335/382	VK4ARB	159/180	VK5WO	335/371	VK4CHB	177/179
VK5WO	335/367	VK4BP	159/000	VK3QI	335/350	VK6APH	171/172
VK3QI	335/349	VK2GSN	152/000	VK7BC	334/343	9A4KA	168/000
VK6LK	334/359	VK7LUV	148/000	VK6HD	333/360	SM6PRX	162/169
VK3EW	334/340	VK2EJK	144/000	VK3OT	333/347	VK3VB	153/155
VK3DYL	334/340	VK2SPS	141/143	VK3AKK	333/346	VK2SPS	142/143
VK3SX	334/340	VK8LC	136/000	VK4UA	331/347	OK9MCR	129/140
VK5MS	333/387	OK12SZ	136/000	VK4AAR	330/334	VK3OZ	126/127
VK3AKK	333/346	VK3DQ	133/147	VK2AVZ	329/340	VK7CQ	123/125
VK2FGI	333/339	VK2LEE	130/132	VK3UY	328/331	NOMSB	117/000
VK6HD	332/358	VK4VIS	126/128	<b>GENERAL LISTING - RTTY</b>			
VK4UA	331/345	VK2IRP	125/101	VK3JI	322/361	VK3EBP	253/255
VK1ZL	331/337	TG8NE	125/000	VK3AMK	322/341	VK2BOS	124/126
VK6NE	330/346	SM6PRX	121/126	VK4LV	320/319	VK3AMK	100/102
VK3OT	330/344	VK2MH	116/118	VK4DV	313/328	VK5RY	100/102
VK4OH	330/337	VK2YN	113/115	VK6RO	311/317	<b>GEN-LISTING - 6M. OPEN</b>	
CT1EEN	330/000	JA8XDM	111/000	VK4ICU	311/313	VK4ABW	101/000
VK2AVZ	329/340	C21DJ	109/000	VK4DP	309/323	<b>GEN-LISTING - 2M. OPEN</b>	
VK3CSR	329/338	VK3MRG	108/000	VK3DP	305/308	(Vacant)	
VK2DEJ	329/335	VK5UO	107/110	VK2UK	303/298	<b>GEN-LISTING - SATELLITE</b>	
VK4AAR	328/332	ZS6IR	102/104	VK8LC	291/294	VR2XMT	112/114
VK3YJ	326/332	C21NJ	102/000	VK7TS	285/286	<b>GENERAL LISTING - SSTV</b>	
<b>GENERAL LISTING - PHONE</b>				VK3CIM	282/286	(Vacant)	
VK7BC	324/329	VK2FZR	102/000	VK3VQ	278/293	<b>GENERAL LISTING - DIGITAL</b>	
EA3AKN	323/331	VK2EJM	101/103	VK2HV	273/000	(Vacant)	
VK3AMK	321/340	VK3CTO	101/102	VK6ANC	267/271	<b>GENERAL LISTING - FAX</b>	
VK8VS	318/323	VK1PRG	101/000	PY2DBU	264/267	(Vacant)	
VK5FV	319/322	<b>HONOUR ROLL (326) CW</b>		VK6MK	263/256	<b>GENERAL LISTING - SSBT</b>	
VK4SJ	316/316	VK3QI	334/346	VK2CWS	260/252	(Vacant)	
VK4LV	313/307	VK5WO	331/347	VK4DQ	248/276	<b>GENERAL LISTING - DIGITAL</b>	
VK3JI	310/325	<b>GENERAL LISTING - CW</b>		VK5UO	246/250	(Vacant)	
VK6APK	310/315	VK3KS	307/335	VK6APW	239/240	<b>GENERAL LISTING - FAX</b>	
VK5VV	306/326	VK3AKK	300/305	VK4DA	237/239	(Vacant)	
VK6RO	305/311	VK4LV	297/300	VK8AM	236/000	<b>GENERAL LISTING - FAX</b>	
VK6ABS	304/000	VK4ICU	291/000	VK2YN	204/208	(Vacant)	
VK4ICU	303/305	VK3JI	274/299	VK2FHN	193/000	<b>GENERAL LISTING - FAX</b>	
VK3IR	302/306	VK7BC	248/255	VK2BOS	181/184	(Vacant)	
VK1TX	300/000	VK6MK	248/249	<p>The W.I.A. Federal Awards DXCC program congratulates Bill VK4LC, the first VK to achieve dual 335, "Phone &amp; Open", and Austin VK5WO and Peter VK3QI for achieving 335 countries.</p> <p>The W.I.A. DXCC program has been audited to the month of June, if you find your Call sign not listed it means you have not updated in the past 5 years or your score has dropped below 100.</p> <p>The W.I.A. Awards program advises, with any submissions they can not accept just a country list.</p> <p>The W.I.A. Awards Program General Rules have not changed. They are: Applicants need to hold QSL cards for all QSO's claimed. However "do not send QSL cards" with your application or update. A list of all two way contacts is needed, which should list the following:</p> <p>Call sign of station contacted, country worked, date, time, frequency and mode as shown on check sheets. At the bottom of the check list a declaration signed by an official of a recognised society or by two licensed radio amateurs. Signatories to the declaration should clearly indicate their names and call signs. Copies of the rules and current DXCC country lists are available, direct by email or hard copy via the post. Email to <a href="mailto:awards@wia.org.au">awards@wia.org.au</a> or post to Federal Awards Manager P.O.Box 196, Cannington, Western Australia. 6987. Thank you Mal. VK6LC</p>			
VK8DY	297/301	VK3DP	245/247				
VK4DP	293/305	VK2CWS	244/246				
VK2UK	292/297	VK4DA	237/239				
VK6LC	289/292	VK3DQ	234/261				
VK4EJ	286/288	VK3CIM	228/229				
VK4BAY	283/286	IK1ZQD	210/000				
VK3DP	274/277	VK4DP	205/216				
VK2HV	272/000	VK7TS	204/000				
VK7TS	270/271	VK7RO	201/204				
VK6ANC	265/269	VK2YN	197/199				
VK2CA	265/000	VK6HW	179/182				
VK3VQ	261/278	VK5UO	165/166				
VK3UY	260/262	VK4UA	155/145				
VK6IE	258/261	OK12BNC	144/000				
VK3CIM	250/254	VK4AAR	143/145				
VK8KT	231/233	VK8AM	138/000				
VK6APW	228/229	N0TM	135/000				
VK8AM	225/000	VK7DQ	131/132				
VK3SM	222/242	DK6AP	120/000				
VK4IL	212/000	VK8KV	112/113				
VK4AO	203/000	K5QNM	110/113				
VK3DVT	201/204	VK5BWW	110/113				
VK6BH	200/000	SM6GZN	110/111				
PY2DBU	195/197	OK1FED	109/000				
VK2FHN	190/000	VK4CXQ	106/000				
VK7JAB	186/000	UR5BCJ	103/105				
GOVXX	184/000	VK3DG	102/000				
VK6APH	168/169	SM6PRX	101/102				
VK4CHB	167/168	<b>HONOUR ROLL (326) OPEN</b>					
VK2BQS	164/167	VK4LC	335/382				
LU5DSE	161/000						

# VHF - UHF.. AN EXPANDING WORLD

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Web page: <http://members.ozemail.com.au/~tecknoit>

Fax: +61 8 82924501

Phone: 0403 368 066 AH ONLY

All times are in UTC.

## 50 MHz

The following information is courtesy of Bill G4UPS, St. Pierre & Miquelon (46 50 N, 56 20 W). These islands in the North Atlantic Ocean, south of Newfoundland, were first settled by the French in the early 17th century and represent the sole remaining vestige of France's once vast North American possessions. FP/NA1CW has given a new country to many 6 m buffs. The callsign NA1CW is the new call for Tim N1RZ. Grid square GN17VA (46 50 N, 56 20 W)

**Angola:** Heard I3LLH, the QSL manager for D2EB informing a G station that he had only received the logs from D2EB up to September 2001. A further QSO with Henry, I3LLH on 29th June confirmed that he was having difficulty obtaining the logs of D2EB. He had over 1,000 QSL cards but had so far only received logs up to September 2000. So it looks as if we are going to wait some time before we receive the QSL cards!!!

**Switzerland:** A new beacon heard on 3 June 2002 for the first time. 1724 UTC on 50.058.5 HB9SIX JN47KM a CW beacon and very strong 599 with lots of HB9 activity at that time.

**NEW 6 m BEACON:** A new beacon heard on 29th June at 1046 UTC for an extended period - SR3SIX 50.015mhz locator JN92DF. Reported to Brian G3HBR and he was also hearing weaker than this location. Beacon peaked 579.

## GippsTech 2002

The fourth technical symposium run by the Eastern Zone ARC, entitled "GippsTech 2002", was held over the weekend of the 6th & 7th of July 2002 at the Gippsland Campus of Monash University, located in Churchill.

Churchill is about 2 hours drive east of Melbourne. The Gippsland Technical Conference (GippsTech 2002) had its focus on a number of topics of relevance to amateurs interested in amateur VHF, UHF and Microwave communications.

Without doubt this was the biggest and

most successful one of the series so far! Attendance, including partners, exceeded 100, fast approaching the attendances of similar events in the US and the UK. Dare I say that "GippsTech 2002" outdid the RSGB Microwave & UKSMG Conference I attended, in the UK, in April 2002!

Amateur operators attended from all states (and one ZL) except VK6 this year. The contingent from both VK2 and VK5 had more than doubled in numbers over last year. Those who attended had a wide variety of interests with an even distribution amongst weak signal working and microwave.

Chaired by Peter Freeman, VK3KAI, GippsTech 2002 coverage was expanded with a good flow between full-blown technical presentations and some shorter segments.

Current Digital modes being used for Weak signal work using software by Joe K1JT was one of the main subjects discussed. It shows how much has occurred since last year when we were looking at Hellscriber and PSK31 as the state of the art! While PSK31 is still in regular use on HF I didn't hear anyone talking about Hellscriber this year!

Neil Sandford VK2EI followed on from last year's 24 GHz presentation with changes made to his 24 GHz portable system to include the surplus 500mW "Millewave" 25 GHz PA modules obtained from the USA. The estimated power output is in the region of 300-400 mW. This is nearly a 10-db improvement over the previously used power levels using DB6NT PA's with 2 x MGF1302's in the PA.

Trevor VK5NC also had photos of his updated system using the same PA as well. Russell VK3ZQB has been busy updating his system and VK5KK is working to complete his upgrade to the same level. With 600 mm dishes, bigger guns will be out "breaking records" on 24 GHz this coming summer!

Doug VK3UM gave a pictorial talk on

the building of his EME system including the installation of the 10-metre dish. One could imagine the engineering and time required to do it properly, with the extra challenges of being on an exposed hill, the dish being blown half way down the hill at one stage ... close to being irrecoverable.

Doug also gave a run down on his pending European "EME pilgrimage", no doubt we will have more to report on that in the next few months.

Other talks covered Antenna software (NEC), VHF propagation, Circuit simulation, Antenna construction and more. The display of equipment was expanded with static items related to the lectures over the two days. Traders also had parts and kits for sale. The room was packed for the two days showing the high level of enthusiasm generated.

There was a predominance of microwave gear from the Eastern Zone ARC members. If you think microwave communications isn't becoming popular, think again! In the previous twelve months, Peter VK3KAI, helped circulate a number of "White box" 10 GHz transverters, some of these completed and displayed. The quality and innovation evident in the systems was high. We might not have the number of operators as Europe but the equipment is on par (or better!).

The hard copy material for the conference will again be collated into the proceedings for 2002. The Eastern Zone ARC is to be congratulated on the well-organized event (including the partners program) along with the work done by the presenters.

Spare copies of Proceedings for the previous 3 Symposiums are still available for sale.

For further information, look on the Eastern Zone ARC website at <http://www.qsl.net/vk3bez/index.htm> or contact Peter VK3KAI (QTHR).



## Digital "DX" Modes

Rex VK7MO supplied the following:

### FSK441

Meteor activity seems to be improving with a number of stations reporting one or two burns of a few seconds during the activity sessions recently.

The activity sessions will continue as Type A on 144.230. I will ask Ian, VK3AXH, to run the 40-metre report-back session on the Saturday morning.

Adrian, VK2FZ, reports significantly increased meteor ping rates on the Geelong beacon in the evenings, which he relates to current shower activity. He will be on listening on 144.230 each weekday evening in Type A format, beaming south, from 9:30 pm to 10:30 pm local up to 10 August. He will only transmit if he sees something. He welcomes any calls.

### Rare Grid Square QE36

I will have been portable on Saturday 3 August from Tinderbox in QE36 South of Hobart, from 0815 local (2215 UTC) on 144.330 for at least 90 minutes or as long as I see new signals. Following my recent rare grid square exercise to the mainland I have amended the procedures slightly for rare grid square operations as follows:

I will have called CQ VK7MO and looked for stations to respond with a report eg VK7MO 26 VK3AXH 2626. I responded VK3AXH R16R16 and looked for VK3AXH RRR. When I got VK3AXH RRR I sent 73 and gave a report to the next station on my list eg 73 VK3AEF R27R27. VK3AXH sends 73 in single tones when he receives my 73. I dropped the 73 when I received the single tone 73 and replaced this by hash and a number to indicate the number of stations still on my list including the station being called eg #2 VK3AEF R27R27.

### FSK441 Technical

Joe Taylor, K1JT, has advised that on single tones WSJT uses a bandwidth of 43 Hz compared to 441 Hz for standard code. This potentially provides up to 10 dB improvement on single tones but to gain full benefit of this improvement you must be tuned to within 21 Hz.

Joe also advises that the full 10dB improvement is only achieved if you have a low noise environment and can set the QRN to a low value – say 3 or less. The shorter duration required to

receive single tones also allows one to use the peak of a ping thus further improving performance.

Noted that the narrow bandwidth, 43 Hz, filter is run for each receive segment as well as the normal 441 Hz filter, independent of whether the single tone box is ticked. This means that single tone reception is always available with single tone messages being reported in a separate column to the left of the standard messages. The purpose of ticking the single tone box is to transmit in single tone format; this does not effect what is received.

John Martin VK3KWA reports ... three new national Digital Modes records have been set in the last month: New 2 metre record VK7MO/3 to ZL3TY, 09/07/02 2142.5 km (FSK441). New 70cm record VK3FMD to VK5OA 28/06/02 375.7 km (JT44) to be broken the following day by: VK3KAI to VK5OA, 29/06/02 496.7 km (JT44)

If you want more information about WSJT & JT44, the best resource is that put together by Rex VK7MO at <http://www.tased.net.au/taamillim/vk7twis/>

## Microwave Round Up

Barry VE4MA reports ... I have been busy performing 47 GHz Sun Noise Tests in recent weeks and comparing notes with Al W5LUA, Gary AD6FP and Will W0EOM. There are few people looking at sun noise or even capable of doing so at this frequency. There is a shortage of large antennas rated for this frequency.

Measurements were taken using 1, 2, 3, 4, 6, 8 and 10 ft dishes and all receivers are believed to have Noise Figure of about 4.5 dB. Cold sky to ground measurements are about 1.3 dB using the feedhorns alone.

Here are the Sun Noise results:  
W5LUA 15 " Prime Focus 39 GHz Dish 1.4 dB Sun Noise  
VE4MA 30 inch Offset Metal 2.4 dB  
W5LUA 24" Prime Focus 39 GHz Dish 2.5 dB Sun Noise  
VE4MA 4 ft Offset Plastic dish 3.6 dB  
W0EOM 2 ft dish 4.1 dB  
VE4MA 6 ft Offset Fibreglass dish 5.0 dB  
AD6FP 3 ft Precision (95 GHz) dish 5.2 dB  
W5LUA 10 ft (24 GHz EME dish) 5.7 dB  
Sun & 0.4 dB Moon Noise  
VE4MA same 4 ft Offset Plastic dish with Aluminium foil now on surface 6.4 dB  
VE4MA 8 ft (24 GHz EME dish) 6.9 dB

The remarkable thing is the 3.3 dB gain improvement in the 4 ft offset dish performance with the addition of aluminium foil. The plastic/ fibreglass offset dishes seem to be reasonably

accurate but the reflecting material imbedded in the surface is not very effective at this frequency (designed for 14 GHz). The 30-inch metal offset dish does not seem to be efficient, nor are the 39 GHz dishes.

The 4 ft dish I was using was part of a General Instrument 12 GHz receiving system and has 8 large 5/16inch bolt heads sitting on the surface. I will be modifying this for rounded heads.

The foil was attached with wallpaper cement (temporary) and subsequently painted with white latex paint to reduce the heating of the feedhorn! ... Barry VE4MA

## In closing

David VK2CZ reports ... Latitude and Longitude details of every town, hill, swamp etc in Australia is available on the web and it's not an Aussie web site!! It also includes 98% of suburbs as well. It's a two-step approach to get information:

1. Look up the site name and get the Lat/Long at <http://gnpswww.nima.mil/geonames/GNS/index.jsp>  
HINT: Go to the Gazetteer Search Window and select Australia, generally look for PPA codes in the results - Populated areas means towns.
2. Enter the Lat/Longs into the Grid Square converter at <http://www.amsat.org/amsat/toys/gridconv.html>

This data is unclassified - but will give you an idea of what is known about our geography!! I've found it's accurate for the 6 digit Maidenhead, but be careful you get the correct location you want ... David VK2CZ/VK8AA

News is a little bit light on again this month, better than fifty percent seems to be WSJT/JT44 related .... These modes are doing their best to keep the VHF bands active over winter. Discussions after Gippstech 2002 might see JT44 being used on higher frequencies once a number of stability issues are sorted out. I believe a number of "digital records" are yet to be established above 1200 MHz!

I am now nearly 2/3<sup>rd</sup> permanent resident in Melbourne (weekends only in Adelaide). I am slowly migrating over some of the microwave gear for summer so it won't be long before VK5KK/P3 will be in action!

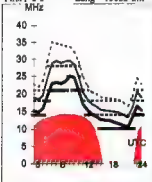
I'll leave you with this thought "The trouble with being punctual is that people think that you have nothing more important to do"

73s David VK6KK

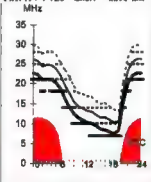
af

# Adelaide-Amman 292 Brisbane-Auckland 123

First F 0-5 Long 13022 km



First F 7-9 1E0 Short 2290 km



August 2002

T index: 100

Legend

UD  
E-MUF  
F-MUF  
OWF  
ALF  
10%  
50%  
90%  
Time scale

# HF Predictions

by Evan Jarman VK3ANI  
34 Alandale Court Blackburn Vic 3130

These graphs show the predicted diurnal variation of key frequencies for the nominated circuits.

These frequencies as identified in the legend are:-

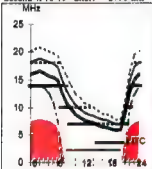
- Upper Decile (F-layer)
- F-layer Maximum Usable Frequency
- E-layer Maximum Usable Frequency
- Optimum Working Frequency (F-layer)
- Absorption Limiting Frequency (D region)

Shown hourly are the highest frequency amateur bands in ranges between these key frequencies, when usable. The path, propagation mode and Australian terminus bearing are also given for each circuit.

These predictions were made with the Ionospheric Prediction Service program: ASAP5 Version 4

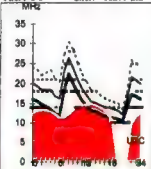
# Adelaide-Invercargil 126

Second 4F16-19 4 Short 2796 km



# Brisbane-Dakar 217

First F 0-5 Short 18279 km



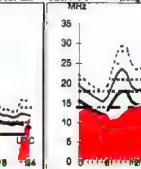
# Canberra-Lusaka 239

Second 4F3-4 4E1 Short 11620 km



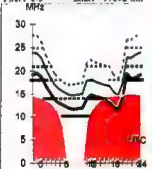
# Darwin-London 145

First F 0-5 Long 26171 km



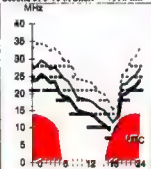
# Adelaide-New York 67

First F 0-5 Short 17092 km



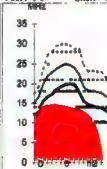
# Brisbane-Honolulu 49

Second 3F5-10 3I Short 7596 km



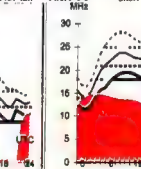
# Canberra-Moscow 317

First F 0-5 Short 14481 km



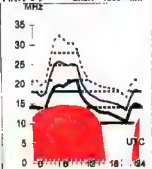
# Darwin-London 570

First F 0-5 Short 13853 km



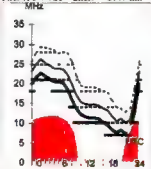
# Adelaide-Rome 296

First F 0-5 Short 15337 km



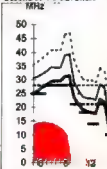
# Brisbane-Singapore 293

First F 5-7 1E0 Short 6147 km



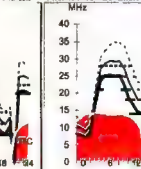
# Canberra-Tokyo 357

Second 3F4-9 3E1 Short 7948 km



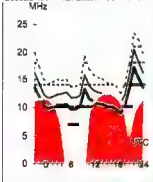
# Darwin-Pretoria 747

First 4F3-10 4E0 Short 10639 km

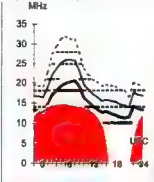


**Hobart-Montevideo 161**

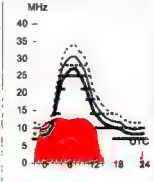
Second 4F3-4 4E1 Short 11044 km

**Melbourne-Budapest 302**

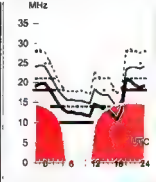
First F 0-5 Short 15558 km

**Perth-Capetown 237**

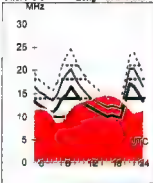
First 3F3-4 3E0 Short 8703 km

**Sydney-Chicago 62**

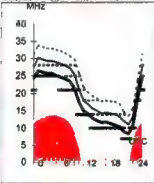
First F 0-5 Short 14876 km

**Hobart-Stockholm 136**

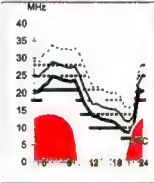
First F 0-5 Long 23871 km

**Melbourne-Jakarta 303**

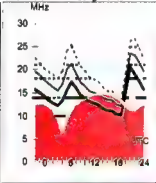
First 2F4-7 2E0 Short 5214 km

**Perth-Osaka 17**

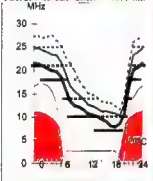
Second 3F5-10 3I Short 7684 km

**Sydney-London 139**

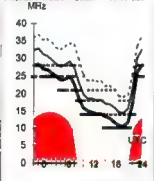
First F 0-5 Long 23032 km

**Hobart-Suva 56**

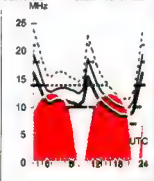
First 2F9-12 2E0 Short 4011 km

**Melbourne-Manila 332**

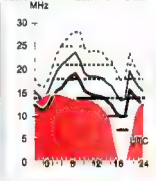
First 2F1-6 2E0 Short 6341 km

**Perth-Santiago 174**

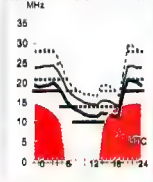
First F 0-5 Short 12709 km

**Sydney-London 319**

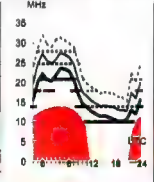
First F 0-5 Short 16992 km

**Hobart-Vancouver 49**

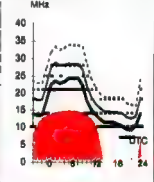
First F 0-5 Short 13427 km

**Melbourne-New Delhi 306**

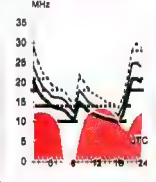
Second 4F5-11 4I Short 10200 km

**Perth-Tel Aviv 302**

Second 4F4-9 4E1 Short 11091 km

**Sydney-Rio de Janeiro 164**

First F 0-5 Short 13519 km



# Ham Shack Computers Part 17

## CQ Contest



Alan Gibbs, VK6PG

223 Crimea Street, NORANDA WA 6062

Email: vk6pg@tpg.com.au

### YLogging along with your contest results (or even just your own records)

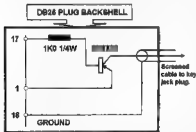
If you think this edition of Ham Shack Computers is just for contesters then read on.

It's valid for the keen CW, SSB and data contesters and the casual rag chews who just wants to make life easier in a modern technology setting. The Internet reveals well over 100 contesting and logging programs currently in use by thousands of Radio Amateurs worldwide - but which one is best for you? Readers can only decide by experimentation.

However, the writer's choice is YLog by Tony Field, VE6YP (1) because of its ease of use, stability on all Windows platforms, versatility, on line support, low cost, and the ability to run on a network.

#### The Hardware...

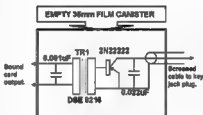
It depends if you decide to key the transceiver from a computer sound card or directly from the parallel printer port.



PARALLEL PORT KEYER BUILT INSIDE A DB25 PLUG BACKSHELL

The parallel port keyer interface shown in the diagram above can be built inside a DB25 plastic backshell for less than \$5, including the plug and backshell components. The installation is neat and tidy with just a screened cable with a 1/4" jack plug into the transceiver key socket.

If you prefer to use the sound card output to key the transceiver, the bottom circuit fits easily into a recycled 35mm film canister. Readers who built the



SOUND CARD KEYER BUILT INSIDE A FILM CANISTER

PSK31 interface (2) would already have the ideal housing for the sound card CW keyer because the interface box already has connections from the sound card output thus avoiding duplicating more leads.

Add the new circuitry inside the interface box and a new lead to connect the keyer to the transceiver keying jack.

The transformer offers DC isolation between the transceiver and the computer, and the advantage of this technique means that all other digital modes can be used without fiddling with the connections. With the right software it becomes streamlined and very easy to use on the various multi-modes.

#### CW Software

With YPlog in the CW transmit mode, a 3kHz tone is generated from the sound card output. This tone is fed to TR1, the 2N2222 saturates pulling down the collector to ground thus keying on the transmitter.

The primary winding of TR1 and the 0.001uF capacitor resonate at about 3kHz improving the sensitivity. The resulting CW keying generated is clean and simple, and avoids any modifications to the transceiver or its interfacing plugs and sockets. Lastly, either keyer can be built from junk box parts in about one hour all ready for your next on air contest or rag chewing session.

#### SSB Contesting

This can also be done with YPlog in the SSB Contest Mode. It requires the user to prepare a set of .WAV files that are linked to each of the function keys (F1 - F8) where F1 is labelled "CQ TEST", F2 might be "59+serial number" and so on. To interface the sound card output to the transceiver, the low-level audio line input or the microphone input socket must be accessed.

Modern transceivers with audio line input and output sockets are fine, but if you are stuck with only the microphone input socket, it can be messy changing from Contest Mode to Microphone Mode unless they are correctly integrated by mixing.

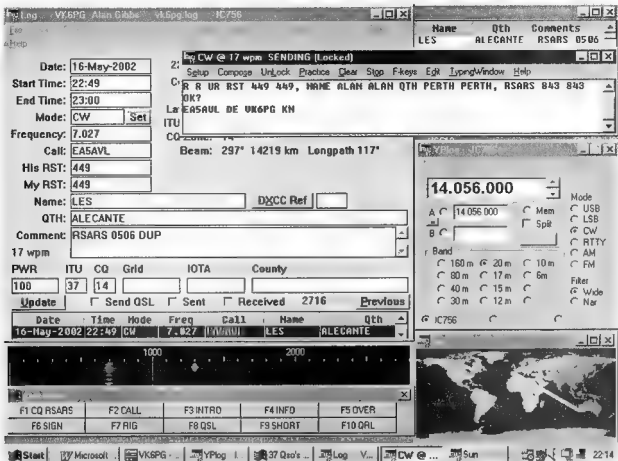
Once done the system is just as easy to use as the CW keying technique. For more details on how to achieve SSB Contest operation, see the Help file in the YPlog software package.

Using the above techniques, your Ham Shack Computer does the hard work by integrating all your software options with your station AR equipment. From now on you should be able to operate in a CW, SSB, RTTY, PSK31 contest, or just leisurely "search and pounce" for DX on the HF bands using your local packet DX cluster all at the same time from your computer screen!

But what does it all this actually look like on the computer screen? Read on...

The image (facing) of the total screen area on the writer's Ham Shack Computer looks awesome at first. So, let's move around each window and see what's happening.

The CW keys window shows the pre-programmed macros for a contest. The F1 key does the CQing, F2 to call a station before a QSO is established. INTRO sends HISCALL de MYCALL, and the cascaded F3, F4, and F5 are used



for sending the exchange seen in the SENDING window at the top right. F6 has the message R 73 ES GL HISCALL de MYCALL VA to complete the exchange.

Entering a callsign in the appropriate field in the log generates the RST information, checks for duplicates (as shown), and F9 fills in the name and QTH automatically. The CW menu offers the option to run CW in the S+P (Search and Pounce) mode, and to add the serial number after the RST. Automatic serial incrementation is created when the contact has been Updated and the log is cleared ready for the next contact. The transceiver command screen is seen on the right where rapid band changes and filters or mode switching can be done by a simple mouse click. If a new call is entered in the log, the beam swings around automatically, bearings and distances are displayed, and a pointer appears on the Mercator Map in the lower right of the screen.

All the important windows are displayed on the computer screen, and by "clicking" onto a specific window it can be brought to the front for perusal and operation. However, the layout shown allows the operator just one "click" anywhere on the screen to make things happen in a fraction of a second.

The full YPlot Contest Mode has options to enter the rules and points accumulated for particular contests, bands, IOTA etc, and automatically collects and calculates the scores, QSO rate per hour and much more. Specific contests like the CQ World Wide CW DX Contest is already programmed into the software. Just add your callsign and the computer does the rest for you. Scraps of paper and dupe sheets have gone into history! Once the contest has finished, your new contest log can be merged with your usual station log, or converted to AIDF format and sent by email to the Contest Manager within minutes of the contest ending. HI

## Ham Tip No. 17.

If the DigiPan waterfall is windowed as well, you'll be able to SEE the pileups, accurately, set your DSP filters, sneak into a tiny gap, grab the new station and be off while the others are still grubbing around in the pileup and henpecking QRM!

Ham Shack Computers, Part 18 next month features modern Log Keeping on your Ham Shack Computer.

- (1) VE6YP Logging and Control: [www.members.shaw.ca/ve6yp](http://www.members.shaw.ca/ve6yp)
- (2) PSK31-The Easy Way. VK6PG. In AR Magazine, March 2000 & June 2001. Or download free from: [www2.tpg.com.au/users/vk6pg/vk6sig](http://www2.tpg.com.au/users/vk6pg/vk6sig)
- (3) Ham Shack Computers Web. [www2.tpg.com.au/users/vk6pg](http://www2.tpg.com.au/users/vk6pg)

73 ES GL IN TEST DE VK6PG VA

# Over to you

## Attention to our "Old Timers"

The Editor AR Magazine

For a few years now some amateurs have expressed views of the ultimate demise of amateur radio with the Internet overshadowing our hobby. Personally I didn't want to believe it and thought those views were somewhat an over-reaction, but now I'm not so sure.

Why were many of us drawn to amateur radio? Communication across space without wires? Being able to contact people in different countries around the world?

The more technically minded wanted more, to understand the whys and wherefores, to experiment, to investigate different systems, to try various types of antennas and to try new frequencies.

There will remain a need for technically minded people who understand electromagnetic radiation in the RF spectrum, but realistically the clamour of youth queuing up for admission to the amateur ranks has diminished. Isolated small flare-ups may occur when tasty carrots are dangled by well meaning folk, but the fact is our numbers are decreasing.

As Steve, VK5AIM, said in the May issue of AR, let's 'look after our Old Timers'. Those of them that practically need to relocate to a retirement village have very limited opportunity to continue their life-long hobby. Surely we should do everything we can so that they may continue as members of the amateur fraternity.

Let's look at the broader picture and put aside the nit-pickers and pedantic souls who enjoy searching out tiny inequalities in rules and regulations that don't really matter. Small wonder this country is going backwards, the small minded are holding us back! Dare I mention the Morse Code debacle?

ILINK and ECHOLINK provide amateurs in retirement villages with a means to continue contacting other amateurs around the world, many of them being long time friends in AR. Persistent opposition could alienate more radio amateurs from the WIA.

I liked Will McGhie, VK6UU's article too.

73, Murray Burford, VK5ZQ.

## Attention to Attenuators

Designers and designer constructors of attenuators (pads) often neglect to calculate the power ratings of the chosen resistor components. That design fault can result in wild chirping of the shack smoke detector or worse if not detected in time.

Consider the following example- a 10dB p section pad required to reduce 10 watts input to one watt.

The standard component resistors are 96.25 ohm input and output shunts connected by a 71.15 ohm series element. The input 96.25 resistor must absorb  $(50/96.5) \times 10 = 5.2$  watts; of the remaining 4.8 watts the series 71.5 ohm must absorb  $(71.15/104.1) \times 4.8 = 3.28$  watts; the load of 1 watt and the output 96.5ohm shunt account for the final 1.52 watts. It is common practice to use equal rating, input and output shunts, but that is only necessary if the pad is reversible.

An analysis of a 10dB 10 watt Tee pad, comprising two 26 ohm series elements and a 35 ohm shunt element, show that the resistor ratings should be, 3.7 watts for the input series 26 ohm, 4.8 watts for the 35 ohm shunt and 0.52 watt for the output series 26 ohm.

If choosing ratings and values becomes too complicated I suggest, three 3dB tandem pads for the ten watt 10 dB job. In that configuration the highest rating resistor is 3 watts in the first pad, 0.8 watts, in the second and less than 0.5 watts is the highest rating in the last pad. An unavoidable mismatch loss in the chain will probably supply the extra dB.

It is of course possible to design and produce a single 10 dB 10 watt pad. Designers will need to brush up on their resistor circuit analysis for the above analyses but it is not difficult and a worthwhile "self training" exercise.

Lindsay Lawless VK3ANJ.

## Will's Page, May AR — Attention to Regulations

The Editor AR Magazine.

Some people love 'em. I am sure many sit on their bottoms just conjuring up new rules and regulations thus accumulating mountains of stuff which many of the perpetrators themselves may be partly drowned in, having lost the meaning or intent of many rules anyway. No wonder arguments rage on the interpretation of many regulations.

I recall a vehicle incident at a

roundabout where a woman driver thought she had acted correctly, the police thought she had acted correctly, but in a subsequent court case, a judge ruled otherwise! What chance road safety?

The "Regs" exam amateur radio candidates are required to sit for use to cause little trouble "everybody" used to pass. Now things are different, "everyone" doesn't pass 'Regs.', it comprises so much 'Gobbledgeook' (borrowed from Neville Williams) that the theory exam causes them less anxiety.

As an example just look at the transmission types codes, viz. 3K00J3E, 16K0F2D and 6M25C3FMN. What a lot of unnecessary stuff to cram into one's memory for an exam. Gobbledgeook at it's finest! Surely all one needs to know is that the information exists and where to find it.

Will may have got a little 'carried away' in his article, but that's often what's needed to get peoples' attention.

73, Murray Burford, VK5ZQ.

## Attention to detail

Dear OM Colwyn,

About your "Editor's Note" appended to my article in AR July 2000.

Why did you say "there may be a few errors in this which I have been unable to correct, information not available".

If you think there are errors in material submitted, your first duty as Editor is to consult the author, not publish comment that can be taken as disparaging.

You note the double entry about VK2BQ. An email or a phone call from you to me could have explained why he appeared in two categories in my analysis.

Three years ago I had not resolved which category best fitted the circumstances of VK2BQ's death.

Being familiar with air operations out of Vivigani airstrip I felt an explanatory footnote was not needed because a perceptive reader could see that Flying Officer Easton's aircraft crashed in friendly territory shortly after take off.

In 1944 the nearest Japanese with a gun (or sword) would have been on New Britain about an hour's flight away. It is pulling a long bow to claim that this accident even though it resulted in deaths was a result of an encounter with

# Over to you

the enemy, a criteria I believe to be necessary for inclusion on a proper "Honour Roll". The "Killed in action" is therefore not relevant and should be deleted.

I note your use of the Royal Pronoun "We" in your penultimate paragraph. Who are "We"?

Determination of policy about a legitimate W.I.A. Honour Roll is a matter for the Federal Executive. There are significant problems surrounding this issue. Not the least of which is doubt about the completeness of the list and whether it is a national or membership listing.

Off-the-top of one's head comment such as yours does not help produce a result that gives credit where credit is due.

By all means list the names of all who wore a uniform in WW2 but don't make the mistake of including those who never heard a shot fired on a Roll that honors brave people like VK3HN, VK4DR etc who were killed as a result of confronting an enemy.

73 Col Harvey VK1AU

## Further Editor's Note

I am sorry my wording caused offence. I was purely trawling for further information, rather than questioning the accuracy of Col's work or his sources.

I highlighted the double entry to head off comments that it was there. I appreciated why Col had a double entry. I suppose I got a bit carried away using "we" and "I" might have been more appropriate. VK5UE

**NOT SOMETHING TO SAY ABOUT AMATEUR RADIO THE W.I.A. THIS MAGAZINE THE A.C.A.**

**THIS IS THE PLACE TO DO IT**

## Entering the entry level debate

The Editor AR

The participants in the current discussions about "entry level" licensing and the future of amateur radio could include consideration of Pat Hawker's article on those subjects in his Technical Topics column of August 1988.

The following is a precis.

"The ITU Radio Regulations identify radio amateurs as "duly authorised persons interested in radio technique".

It accepts that when authorised to venture on the airwaves newcomers, may have only the minimal technical knowledge required by their own national authorities. The Radio Regulations do not stipulate any requirement for a technical examination, although this is taken for granted, or to define the speeds to be achieved in the obligatory morse test for operation below 30 MHz. But an "interest in radio technique" does indicate that licensed amateurs should not be content to be purely users of entertainment appliances. Also it doesn't mean that only those who build their own equipment can be considered true amateurs. There is no shame in starting young, or as a beginner with a bare minimum of technical understanding—but there is

no excuse for remaining a technical ignoramus, year in, year out, time spent filling the spectrum with idle chatter, content to remain appliance operators, openly professing no real technical interest or knowledge. The radio amateur has always been well served with technical publications, books, periodicals, and opportunities for self training. But books are meant for a modicum of study, and not for propping up a wonky transceiver or looking good on a shelf."

Pat was more emotive than appears from the above, but he draws attention to some points which we overlook. The literature available mostly requires a level of technical literacy suitable only for "home brewers".

Journals such as AR and Rad.Com. should endeavour to include some real technical papers; AR has included some in past issues: the discussion about Aircraft Enhancement of VHF propagation for example.

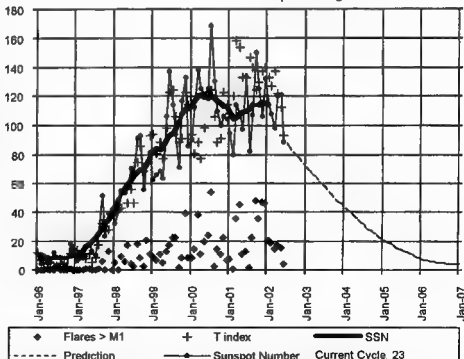
Surely there are similar articles available or is it that the publications committee is suppressing these in favour of construction recipes in the belief that home brewers are the only true amateurs.

Lindsay Lawless VK3ANJ

## Sunspot Numbers

Monthly Sunspot Average Jun 2002: 88.5

Annual Sunspot Average Dec 2001: 114.7



Drawn from monthly data provided by the Ionospheric Prediction Service

# HAMADS

- Hamads may be submitted by email or on the form on the reverse of your current Amateur Radio address flysheet. Please print carefully, especially where case or numerals are critical.
- Please submit separate forms for For Sale and Wanted items, and be sure to include your name, address and telephone number (including STD code) if you do not use the flysheet.
- Eight lines (forty words) per issue free to all WIA members, ninth and tenth lines for name and address. Commercial rates apply for non-members.
- Deceased estates Hamads will be published in full, even if the ad is not fully radio equipment.
- WIA policy recommends that the serial number of all equipment for sale should be included.
- QTHR means the address is correct in the current WIA Call Book.
- Ordinary Hamads from members who are deemed to be in general electronics retail and wholesale distributive trades should be certified as referring only to private articles not being re-sold for merchandising purposes.
- Commercial advertising (Trade Hamads) are pre-payable at \$25.00 for four lines (twenty words), plus \$2.25 per line (or part thereof), with a minimum charge of \$25.00. Cheques are to be made out to: WIA Hamads.
- Copy should be typed or in block letters, and be received by the deadlines shown on page 1 of each issue of Amateur Radio, at:

Email: [newsletters@ozemail.com.au](mailto:newsletters@ozemail.com.au) Fax: 03 9756 7031

Postal: Newsletters Unlimited, PO Box 431, Monbulk Vic 3793

Please send your Hamad by ONE method only (email preferred)

## FOR SALE ACT.

- **Kenwood TS-1308** 100 watt HF transceiver with microphone, owner's manual and service manual. \$600. **Kenwood TR-9130** 25 watt 2 m multimode transceiver with microphone, owner's manual and service manual, mobile mounting bracket and BO-9 base unit to match TS-130 on the desk. \$350. **Icom IC-2A** 2 m synthesised handheld transceiver with charger, carry case, manual, headset and mic/speaker. \$150. **Icom IC-4E** 70 cm synthesised handheld transceiver with charger, carry case, manual, and mic/speaker. \$150. **Icom IC-22S** 2 m transceiver. Used for packet radio but loudspeaker audio low. With manual and mobile bracket. \$75. **HP320LX WindowsCE** handheld computer. Supplied with TNC program for portable packet use as well as standard Windows CE software (Outlook, Word, Paint, etc). With docking adaptor, charger, 4Mb RAM card and manuals. \$100. **HP200** handheld computer. **MS-DOS** handheld unit with 10Mb ram card and manuals. \$100. **AEA PK88** TNC with manual. \$100. All items have had one careful owner/reluctant seller and all with original shipping cartons if required. Contact Ray VK1ZJR on Phone 0419 601 738 or [rrchoe@msn.com](mailto:rrchoe@msn.com) or via PO Box 3391, Weston Creek, ACT 2611.

## FOR SALE NSW

- **Kenwood 27A** with soft cover \$280. **Alinco DJCH** (credit card size) 70cm with spkr mic \$40. Yam multi-speed modem \$100. **Realistic 30cm** hand-held scanner \$80. **Digitizer** 2 m 30 W power amplifier \$90. All in excellent condition with manuals. Chris VK2MQX QTHR Phone 0425 301 539 BH, 02 9636 7730 AH
- **Antenna Tower 50ft** Southern Cross galv. Angle iron 3 leg free standing in five sections \$400. Vlad VK2KEO Phone 02 6684 1238
- **STC studio microphones**, models 4038 Ribbon 36 ohms impedance, 4037 Dynamic 25 ohms impedance, as new condition. Make an offer John VK2ZCG. Phone 02 9587 2920

- **Kenwood 215A** handheld 2 m transceiver complete with antennas, handbook, charger station, GWO, \$300. Phone Geoff VK2HJ. Phone 02 4655 9731 or 02 4655 1588

- **TEK 500 series CRO components**. CA plug-in, still in the government contractor's wrapping, 53/54K plug-in, some valves and Model B ScopeMobile CRO trolley. Brian VK2GCE. Phone 02 9545 2650 or [preferred] [brianclarke@idx.com.au](mailto:brianclarke@idx.com.au)

## WANTED NSW

- **PRC-9 or 10 cases** - need three; can swap for two PRC-9A cases. Brian, VK2GCE. Phone 02 9545 2650 or [preferred] [brianclarke@idx.com.au](mailto:brianclarke@idx.com.au)

- **Service manual or copy for Codan 6924 HF transceiver**. All costs met. Please contact John VK2FAF. Phone 02 9449 8848, email [wtkie01@ozemail.com.au](mailto:wtkie01@ozemail.com.au)

- **Top cap connector for 6146A**, needed for pending homebrew project. Boat anchor **Hellicrafters S-88, S-99, SX-99, SX-100** or similar circa 1957. Condition unimportant, but hopefully intact and functional. Will pay Australian dollars. Stephen VK2BLQ QTHR Phone 02 9419 6788 email [lowngnrg@aol.com](mailto:lowngnrg@aol.com)

- **Kenwood TS-870, BIRD 43 inserts** - 50H, 100H, 250H. **Valves** 2-1000 and 4CX1600B, Tom, vk2oe@arrl.net or VK2OE PO Box 5252 Wollongong NSW 2520

## FOR SALE VIC

- **Icom IC-260A** mobile all mode with memories, incl book \$450. **Icom IC-22S** Mobile 2 m FM \$175. **Europa 2m transverter** now a 100 W linear \$100. **Europa 800W power supply**, suit above at \$175. **Heath linear amplifier** 5 band 2 X 572B 2000. **Power supply** by A Bles 1000 V to 2400 V, suit above. **Hallicrafters receiver** 5 to 30 MHz breadboard tuning with transformer \$200. **Eddystone receiver** six band breadboard ham bands only incl 1.8 MHz 12 valve \$150. **Yaesu**

**mobile aerials** set 2m to 80m \$100. **McLeod mobile HF multiband** \$300. **Rotator** for 2 m aerials with control 110V \$150. **Radio altimeter meter** ID14A/APNI \$20. **Siemens twin cavity Assy** tunes 432 MHz, as new \$200. **Linear line PA** 2m box 17" X 8", internal p/s, twin meters, RF switching \$150. **Pedestal for tower base rotation** \$20. **1/4 HP 230V motor** with gearbox \$20. **Power supply 12V 3 amp** conservative \$30. **Minilite headset** for mobile use, in wallet \$30. **Phillips dynamic desk microphone** \$30. **VK3DS QTHR** Phone 03 5332 3226

- **Free AR mags back to 1953**. Others. Must take the lot. Sell **Heathkit 2 m FM** with matching PS \$95. **Home brew linear** 20-15 m spare 813 PS \$25. Alan VK3AMT QTHR. Phone 03 9789 9106

- **Yaesu FT-757GX** 4L133092 \$600. Kevin Phone 9792 9503

- New offset lengths **ANDREWS HELIAX LDF-450A, LDF-550A**, 16 m - 44 m. Also connectors. Ray VK3ATN QTHR. Phone 03 5492 2224, Fax 5492 2666, [atnant@ruralnet.net.au](mailto:atnant@ruralnet.net.au)

- **Gap Eagle vertical antennas** moving to antenna farm. Offers. Bill VK3WTM. Phone 03 9798 7702

- **Yaesu FT-990** with service manual v.g.c. \$1200. **Kenwood TS 850S** with service manual g.c. \$350. **Yaesu FL-2100Z** (no valves) with manual \$50. **AIWA microphone** DM-61 g.c. \$50. **Keyer electronic** g.c. \$100. **Ken** g.c. \$50. **Voltmeter** 0-300 AC g.c. \$50. **Kenwood SP-230** with filters, **DSP-B** "Time wave" g.c. **Panther P8 732** g.c., **Cushcraft** Multiband HF vertical R7 \$100. **VK3MJ**. Phone 03 9458 4769

- **Garmin 12 GPS** in very good condition \$400 Contact either Ian VK3AQU or Christopher VK3KQU AH on Phone 03 5751 1631

- **Antenna HB-35C** 5 Element Triband Yagi, 14, 21 & 28 MHz Stainless hardware. Excellent condition \$450. Julian VK3EJR. Phone 0418 678 214 [julianrose@elektron.com.au](mailto:julianrose@elektron.com.au)

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- **KENWOOD TS-430S** with manuals \$450, **AT-250 autotuner** \$200. **SW-200A** 1.8-15 MHz PWR/SWR meter \$150. **MC-80** mic \$50. **YAesu FF700** power supply \$150. **Dominion Electronics 13.8V 20A PS** \$100, **TECH TE-15** dipper \$50, **NALLY 2 section winch-up tower** with AIGA ART3000C HD rotator and controller and **HIDAKA 3-element tri-band**



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#### WANTED VIC

• Base for whip antenna size 9/16 UNF advise cost and P/P John VK3HCT. Phone 03 9580 8369

• Circuit and/or manual for Crammond CTR25 transceiver. Kevin VK3CKL. QTHR Phone 9792 9503

#### WANTED QLD

• Kenwood TS-830S workshop manual needed. Will refund any costs. Phone 07 3390 7762 or noncroucher@powerup.com.au. Ron VK4CRO QTHR

• WWII suitcase transmitter receiver Type 3 Mark II and Type A Mark III, also S-phone 13 Mk IV, No 19 set, No 11 set with or without p/s or part sets. Ray VK4FH. Phone 07 3299 3819, fax 07 3299 3821, PO Box 5263, Delay Hill Qld 4128. Cash paid. Will collect all states.

• Copy of IC-701 manual and schematic, also large roller inductor, reasonable price. Stuart VK4KKQ. Phone 07 4972 9871

• Manual Kenwood R-2000, will pay for photocopies. 800Hz filter YG-455C for R-2000 needed, offers to L40370 Hans Phone 07 5479 4681 hpkliesinger@ozemail.com.au (ex HS1ALK)

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#### FOR SALE SA

• Kenwood TS-930 HF transceiver \$1000. Yaesu FT-840 HF transceiver \$1000. Icom IC-725 HF transceiver \$800, Serial numbers 3120019 and 3L041267 and 05932. All very good condition with owner's and service manuals. Grant VK5AMC. QTHR. Phone 08 8836 3240

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#### WANTED SA

• Copy assembly manual or circuit diagram for Heathkit Transistor Tester model IM-36. Any help appreciated. Keith VK5OQ. Phone 08 8280 7430 keithg@senet.com.au

#### WANTED WA

• Collins 75A4 receiver. Would consider swapping for my Collins R390 general coverage receiver or other old valve equipment. Suffering from a nostalgia attack and am putting together a 1950s amateur band station. Steve Ireland, VK6VZ. Phone: 08 9298 9330 or email: sire@inet.net.au

• Your surplus equipment for sale on the Bring and Buy counter at HAMFEST 3/11/2002. Tables also available. Information from jackborthen@bigpond.com.

#### WANTED TAS

• Siemens Level Meter Model D2055 (200Hz - 620 kHz). Can anybody help? Contact Trevor VK7TB either by email at cabriggs@optusnet.com.au, or by phone at 03 6398 2118

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JOTA and JOTI  
October 19 & 20,  
2002

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# Division Directory

The Amateur Radio Service exists for the purpose of self training, intercommunication and technical investigation. It is carried out by amateurs who are duly authorised people interested in radio technique solely with a personal aim and without pecuniary interest.

The Wireless Institute of Australia represents the interests of all radio amateurs throughout Australia. National representation is handled by the executive office under council direction. There is one councillor for each of the seven Divisions. This directory lists all the Divisional offices, broadcast schedules and subscription rates. All enquiries should be directed to your local Division.

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Web: <http://www.ozemail.com.au/~vk2w/>  
FreeCall 1800 817 844  
e-mail: [vk2w@ozemail.com.au](mailto:vk2w@ozemail.com.au)  
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Fax 03 9885 9298  
e-mail: [wia.vic@wievic.org.au](mailto:wia.vic@wievic.org.au)  
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## Broadcast schedules All frequencies MHz. All times are local.

VK1W1: 3.590 LSB, 146.950 FM each Thursday evening from 8.00pm local time. The broadcast text is available on packet, on Internet [www.iaa.ampr.org](http://www.iaa.ampr.org) news group, and on the VK1 Home Page <http://www.vk1.wia.ampr.org>

**Annual Membership Fees.** Full \$80.00 Pensioner or student \$71.00. Without Amateur Radio \$48.00

From VK2W1 1.845, 3.595, 7.146\*, 10.125, 14.160, 24.950, 28.320, 29.120, 52.120, 52.525, 144.150, 147.000, 438.525, 1281.750 (\* morning only) with relays to some of 18.120, 21.170, 584.750 ATV sound. Many country regions relay on 2 m or 70 cm repeaters. Sunday at 1000 and 1930. Highlights included in VK2AWX Newcastle news, Monday 1930 on 3.593 plus 10 m, 2 m, 70 cm, 23 cm. The broadcast text is available on the Internet newsgroup [www.iaa.ampr.org](http://www.iaa.ampr.org) and on packet radio.

**Annual Membership Fees.** Full \$80.00 Pensioner or student \$63.00. Without Amateur Radio \$50.00

VK3BW1 broadcasts on the 1st Sunday of the month at 20.00hrs Primary frequencies, 3.615 DSB, 7.085 LSB, and FM(R) VK3RML 146.700, VK3RMM 147.250, VK3RWG 147.225, and 70 cm FM(R) VK3ROU 438.225, and VK3RMU 438.075. Major news under call VK3ZW1 on Victorian packet BBS and WIA VIC Web Site.

**Annual Membership Fees.** Full \$83.00 Pensioner or student \$67.00. Without Amateur Radio \$51.00

VK4W1A broadcasts on 1.825 MHz SSB, 3.605 MHz SSB, 7.118 MHz SSB, 10.135 MHz SSB, 14.342 MHz SSB, 21.175 MHz SSB, 28.400 MHz SSB, 29.680 MHz (ptr), 147.000 MHz, and 438.525 MHz (in the Brisbane region, and on regional VHF/UHF repeaters) at 0900 hrs K every Sunday morning. QNEWS is repeated Monday evenings, at 19.30 hrs K, on 3.605 MHz SSB and 147.000 MHz FM. On Sunday evenings, at 18.45 hrs K on 3.605SSB and 147.000 FM, a repeat of the previous week's edition of QNEWS is broadcast. Broadcast news in text form on packet is available under WIAQ@VKNET. QNEWS Text and real audio files available from the web site

**Annual Membership Fees.** Full \$95.00 Pensioner or student \$81.00. Without Amateur Radio \$69.00

VK5W1: 1843 kHz AM, 3.550 MHz LSB, 7.095 AM, 14.175 USB, 28.470 USB, 53.100 FM, 147.000 FM Adelaide, 146.800 FM Mildura, 146.900 FM South East, 146.925 FM Central North, 438.475 FM Adelaide North, AT Ch 35 579.250 Adelaide, (NT) 3.555 LSB, 7.065 LSB, 10.125 USB, 146.700 FM, 0900 hrs Sunday. The repeat of the broadcast occurs Monday Nights at 1930hrs on 3.555kHz and 146.575 MHz FM. The broadcast is available in "RealAudio" format from the website at [www.sant.wia.org.au](http://www.sant.wia.org.au) Broadcast Page area.

**Annual Membership Fees.** Full \$88.00 Pensioner or student \$73.00. Without Amateur Radio \$58.00

VK6W1A: 146.700 FM(R) Perth at 0930hrs Sunday relayed on 1.865, 3.564, 7.075, 10.125, 14.116, 14.175, 21.185, 29.120 FM, 50.150 and 438.525 MHz, Country relays 3.662, 147.200 (R) Catbary, 147.350 (R) Bussellton, 146.900 (R) Mt William (Bunbury), 147.000 (R) Katanning and 147.250 (R) Mt Saddleback. Broadcast repeated on 146.700 at 1900 hrs Sunday relayed on 1.865, 3.564 and 438.525 MHz; country relays on 146.900, 147.000, 147.200, 147.250 and 147.350 MHz. Also in "RealAudio" format from the VK6 W1A website

**Annual Membership Fees.** Full \$71.00 Pensioner or student \$56.00. Without Amateur Radio \$39.00

VK7W1: 146.700 MHz FM (VK7RHT) at 0930 hrs Sunday relayed on 147.000 (VK7RAA), 146.725 (VK7RNE), 146.625 (VK7RMD), 3.670, 7.090, 14.130, 52.100, 144.150 (Hobart), repeated Tues 3.590 at 1930 hrs

**Annual Membership Fees.** Full \$90.00 Pensioner or student \$77.00. Without Amateur Radio \$57.00

VK6 Northern Territory is part of the VKS Division and relays broadcasts from VKS as shown, received on 14 or 28 MHz. The broadcast is downloaded via the Internet.

# South Australian South Coast Radio Group



*The people are from left to right standing:*

Graham Peters, VK5KGP (Victor Harbor),  
Gary Herden, VK5ZK (Goolwa)

*Seated:* Jim McLachlan VK5NB  
(Morphetville), Heather McLachlan,  
Morna Haines (xyl VK5ZD Alan ).

Jim has just been donated an old radio chassis by 5KGP and 5ZK, which he will use in a current restoration project.

## Radio Games

Bill Main (VK6ZX) and Diane Main (VK6KYL) were presented with a Service Award for operating the Goldfields District Scouts Radio Station VK6SZ for 25 years

The Awards were presented on Saturday March 23rd 2002 by the Assistant Branch Commissioner for Scouts WA, Larry Lucas in Kalgoorlie at a Scout Information Day for the Goldfields District.

Bill and Diane, as members of The Goldfields District Section of the Branch Radio and Electronics Team, have been operating the station for JOTA each year since 1978. They have also participated in the RD Contest for a period of some 13 years, taking out the Peter Hughes Trophy for WA Scout Stations in the RD Contest on no less than 11 occasions. On the first Friday of each month they can be heard running the station for the WA Scout Net on 80 m. If you are able to help a Scout or Guide group participate in the "Radio Games" night tune in to 3.600MHz at 1100Z on the first Friday of each month (except school holidays).



At the presentation. L to R: Assistant Branch Commissioner Larry Lucas, Diane VK6KYL & Bill VK6ZX

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